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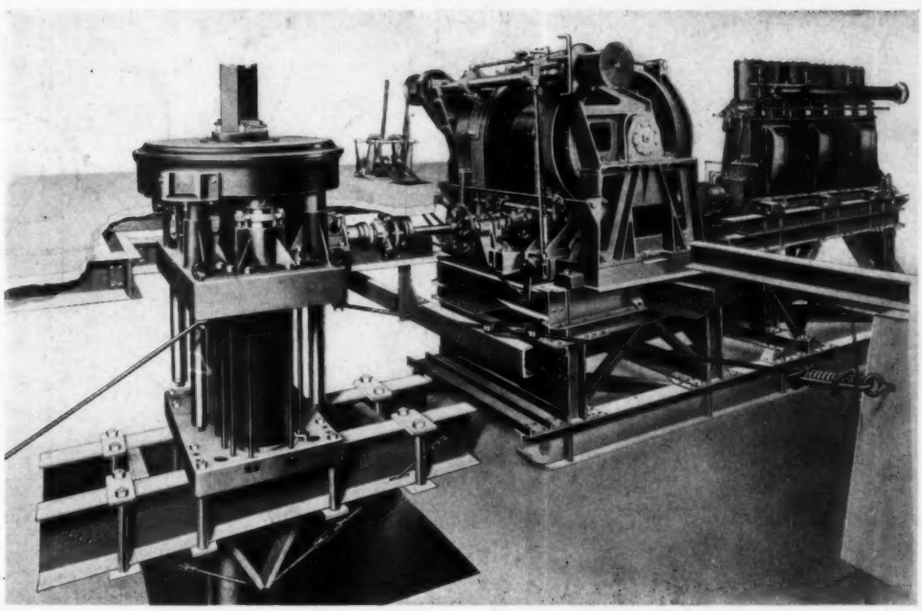

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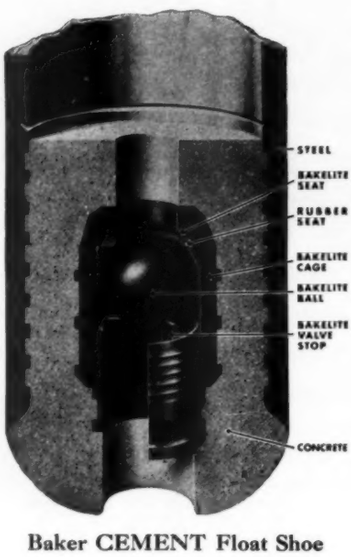

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Progress Delayed While Industry Awaits Action on Numerous Matters Affecting the Business

By ANDREW M. ROWLEY

DELAY in obtaining definite action on several matters of importance to the petroleum industry has increased the uncertainty which has been a prime factor in the weakness of market price structures. The administration's bill, which is expected to virtually place control of the oil business in the hands of government officials and boards, will not be introduced into Congress until after the President returns from his vacation and has had an opportunity to study it. It is understood the President is not expected to return to Washington much before the middle of this month.

Doubt is being expressed that the appeal to the United States Supreme Court from decisions in Texas cases will be argued and decided before the court adjourns for the summer. In the meantime concerns in East Texas are becoming busier in the matter of instituting suits attacking the recently enacted oil laws in Texas. While an improvement in the situation in East Texas is reported there are still many who believe some operators there are merely "lying low" until after Congress has adjourned, in the hope they may thus prevent Federal action or legislation.

Refiners throughout the country are vitally interested in the action of the Department of Justice in instituting suits against individuals and companies in California as, it is said, if the government wins the California cases almost every refiner in the United States is liable to prosecution on the same grounds. Harold L. Ickes, Oil Administrator, realizes the action of the Department of Justice has resulted in an extremely bad situation on the Pacific Coast and he is expected to exert his influence to iron out this complication. In the meantime, this condition has an important bearing on the pooling and marketing agreements despite valiant efforts being made to obtain sufficient support for the marketing agreement to make it effective.

While there is considerable activity in the different fields and prospective areas results obtained thus far have only tended to strengthen the crude oil situation as no discoveries of importance have been made. It now appears as if the Long Lake area in Anderson County, Texas, will be a natural gas field with comparatively little oil production. The Splendora area on the Texas Gulf Coast proved disappointing during the past week when an important test there ran into salt water. The deep test at Binger, Caddo County, Oklahoma, is somewhat of an uncertain quantity at this time but hardly will live up to previous expectations as to its productivity.

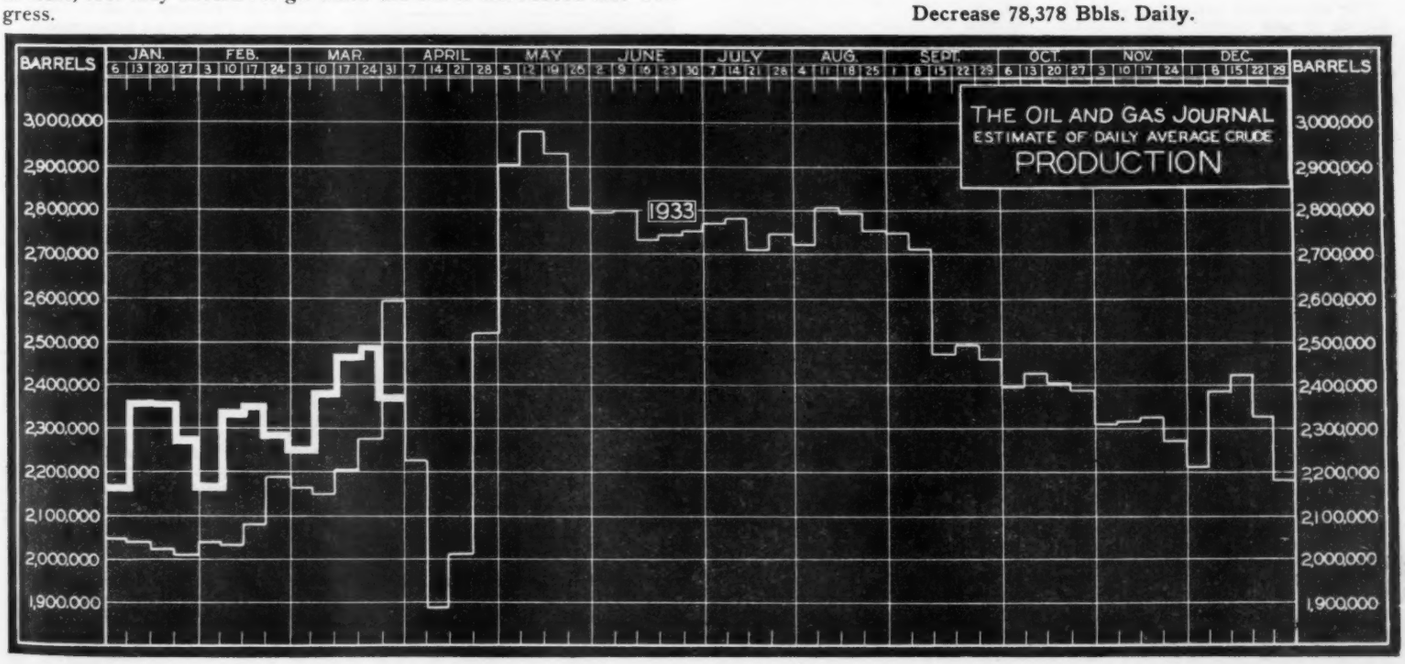
Rumors from Washington are to the effect the P. and C. Committee may not support the administration's bill and that some members, at least, feel they should resign when the bill is introduced into Congress.

Crude Oil Production in the United States

Estimated daily average production for the week ending March 31, and a comparison with previous week and one year ago, follows:

	Mar. 31	Mar. 24	Apr. 1, 1933
Oklahoma—			
Oklahoma City	146,940	166,475	134,685
Seminole-St. Louis	98,080	104,135	97,540
Remainder of State	216,455	229,095	195,705
Total Oklahoma	461,475	499,705	427,930
East Texas—			
Lathrop	205,640	210,310	304,210
Kilgore	149,465	152,865	220,405
Joiner	133,350	136,375	235,625
Total East Texas	488,455	499,550	760,240
West Texas	131,613	132,615	162,755
North Central Texas	89,405	88,045	75,295
Texas Panhandle	56,520	57,810	52,563
East Central Texas	43,795	43,957	58,147
Gulf Coast—Texas	160,413	159,543	148,771
Southwest Texas	48,519	49,205	54,035
Total State of Texas	1,018,720	1,030,725	1,311,806
Kansas	125,475	124,520	121,250
North Louisiana	27,615	28,050	30,125
Gulf Coast—Louisiana	45,792	45,215	37,654
Arkansas	31,040	30,960	30,585
Eastern (except Michigan)	98,500	97,500	89,500
Michigan	27,500	26,500	14,500
Rocky Mountain area	82,070	82,640	75,806
California—			
Santa Fe Springs	40,250	42,750	54,000
Long Beach	60,500	63,500	68,500
Playa Del Rey	8,500	9,100	11,500
Elwood	12,450	13,750	13,500
Kettleman Hills	52,750	66,750	57,750
Remainder of State	288,300	297,650	255,250
Total California	462,750	493,500	460,500
Total United States	2,380,937	2,459,315	2,599,656

Decrease 78,378 Bbls. Daily.



Texas Railroad Commission Receives Nominations and Holds Hearing on Proposed Allowables

AUSTIN, Tex., Apr. 2.—New field allocations for Texas oil fields are being studied by the Texas Railroad Commission as proration orders to govern the state's oil industry during April. From evidence submitted at the hearing the commission was expected to enter orders covering these subjects:

Regulating reclamation plants in East Texas, over which the commission has control under the new refinery regulation law.

A revision of the order requiring production reports on all wells, so that the order may be effective without undue hardship on operators. A committee of engineers was named to work out details.

A new order on Texas refineries, which will be accompanied by new report forms.

An order setting up proration allowables for all fields for April, and possibly for May. Changes from the current field allowables are expected to be slight.

Current allowables, according to the latest compilation of the commission, total 963,709 bbls. Secretary Ickes, oil administrator, recommended that Texas production be held to the consumer demand of 980,700 bbls. as certified by the Bureau of Mines. Meanwhile purchasers of Texas crude nominated for purchase 1,140,993 bbls. during April.

Specific requests for increases at the state-wide hearing totaled 24,500 bbls., after the Big Lake request had been reduced from 33,000 to 15,000 bbls.

Nominations Filed

The following table shows the nominations for each Texas district, together with the present allowable. The East Texas allowable listed is as of March 24, that field being on a sliding schedule which increases the top allowable as the number of wells increases.

	April	May	June
East Texas	503,005	505,599	507,559
East Central	59,785	59,785	59,785
North Texas	51,772	54,807	54,888
Panhandle	56,800	56,800	56,800
West Texas	171,543	173,126	174,850
West Central	34,750	34,855	34,989
Southwest Texas.	52,857	52,919	53,014
Gulf Coast	210,481	210,887	212,120
Total	1,140,993	1,148,768	1,154,005

The approximate percentage of nominations of each district to the total for the state are as follows: East Texas 43.982 per cent, East Central 5.180, North Texas 4.756, Panhandle 4.921, West Texas 15.151, West Central 3.031, Southwest Texas 4.593 and Gulf Coast 18.281 per cent.

A committee was appointed to work at once to prepare rules to govern production reports, subject to commission approval. The committee is working in conjunction with W. F. Knode, chief petroleum engineer for the commission, and expects to complete its recommendations by Thursday. The members were nominated by the various districts as follows: Panhandle, W. B. Hamilton, Amarillo; East Texas, Carl Riestle, Kilgore; Van, R. B. Kelley, Fort Worth; North Texas, D. H. Bolin, Wichita Falls; West Central, E. H. Griswold, Fort Worth; West Texas, Sid Richardson, Fort Worth; Gulf Coast, Stanley Gill, Houston; Southwest Texas, Herschel H. Cooper, San Antonio; Conroe, E. O. Buck, Conroe, and Long Lake, T. A. Hall, Houston.

Only brief reference was made to refinery regulations and that revolved around reclamation plants. These were defended by Claud Williams and assailed by Marshall Young and John Suman. Cleaning of tanks and pits and saving the oil was advanced by Williams as justification for reclamation plants instead of burning the oil. He said thousands of barrels of oil are burned and that it should be prevented in the interest of real necessary conservation.

Chairman Lon Smith said the burning of oil is reprehensible and should be stopped.

Much discussion preceded the appointment of the committee to prepare the forms of production reports. These reports are desired to show the exact production of each well, the lease, the hours run, to whom sold and other data. Affidavits of foremen or production clerks together with an official are required.

Don Emory and others said on the small leases this would cost $250,000 for bookkeeping. It was suggested rules be adopted by classes. Wells on leases could be certified in the aggregate as not having exceeded in the allowable. The commission wanted them to prevent giving allowables to dead wells where an aggregate report is used and also not to permit one well adjacent to another lease to make all the allowable for the wells on the reporting lease. All of these suggested variations for different classes of wells and the committee is to work out a reasonable form with either semimonthly or monthly reports.

Chairman Lon A. Smith opened the session with a statement that just 18 days ago the new bills were signed, which explained why the commission has not had the expected revenue available for stricter enforcement. He said the attorney general and comptroller have advised that the commission may proceed to organize its forces, taking care not to exceed the anticipated income under the new law. He said one injunction has been filed, but dissolved and that the commission is ready for another. The trouble in previous efforts of enforcement have been lack of funds and Smith said they would now be forthcoming.

Twenty Gaugers Added

Commissioner Ernest O. Thompson referred to the impatience of some persons at the commission not having acted faster in criminal prosecutions, but he said the law requires 10 days' notice and then publication in three newspapers three times before it can proceed under the new act. He said compliance is being had as rapidly as possible, as evidenced in the present hearing, and that 20 gaugers have been added to the field forces. He asked the oil companies to pay their February and March taxes instead of waiting until April and May if they want quick action, and he declared that would be real co-operation.

R. S. Christie of the Amerada corporation testifying for East Texas, said the bottom hole pressure had dropped 9 pounds in 30 days, having been 1,256 on March 14 compared to 1,265 on February 12. With an allowable in that period of 12,874,864 bbls. the drop was .705 of a pound per 1,000,000 bbls. The average allowable was 426,162 bbls. per day and assuming an overproduction of 25,000 bbls. the further drop would be .67 and 50,000 bbls. over the allowable it would be at .63. For the preceding 30-day period the drop had been but 5 pounds and with it up to 9 pounds there should be no increase in the allowable, and the field should be stabilized and observed before making any changes.

Mr. Christie said a small decline could be expected and it probably is true that the East Texas drop is less than in other fields. He admitted the Conroe drop was much larger.

E. J. Dunnigan, Jr., Amarillo, asked that the Panhandle allowable be raised from 52,000 to 57,000 bbls. daily on the strength of increased refinery needs. Nominations were totaled at 56,800 bbls. He declared none has gone into storage at the present allowable. He also said that oil which is regarded as having gone into storage is the accumulation of the Gulf and Magnolia companies which wait to run large amounts to the coast, asserting the Magnolia is now sending 300,000 bbls. on its way.

"The Panhandle has suffered keenly by the refineries taking oil out of storage instead of current production," he said, "and thereby squeezing landowners and royalty owners."

Don Emory and W. B. Hamilton of the Phillips Petroleum Co. plied him with questions to show there is no demand above the 52,000 bbls. but Dunnigan insisted there was.

Asks Flexible Allowable

Hamilton said the allowable should be made flexible so as to rise when consumptive demand increased.

Thompson called attention to the Ickes estimate as being for April and May and commented, "but maybe he doesn't know about it snowing in the Panhandle."

Mr. Dunnigan said that in spite of the low demand in the winter months the Panhandle refineries took 400,000 bbls. out of storage, as above current production.

Charles H. Keffer of the Amarillo and other Panhandle gas companies protested against underground waste and gas wastage in the Panhandle, declaring 1,300,000,000 feet of gas daily is taken out of that area. He said 1,000,000 and sometimes 2,000,000 feet is wasted to produce 1 bbl. of oil. He said a fair efficient oil-gas ratio should be adopted. He could not say what it would be, but that each well furnishes a different condition, probably 25 per cent of the potential oil or casinghead gasoline might be right. He said gas should be saved to vastly increase the recovery of oil, it now being wasted and promising a huge underground waste. He charged the gas loss is away out of proportion to the oil recovered. "It should be drastically reduced to save the gas and increase the ultimate oil recovered."

Marshall Young asked the commission to correct its West Central allowable to conform to the actual marginal well production, around 3,000 bbls. instead of 26,000 bbls. There was no objection.

Garland Woodward, representing Cosden Co., asked that the April and May allocation for the Big Spring refinery be raised by 8,000 and 9,000 bbls., respectively, saying it has a capacity of 17,200 bbls. daily and is getting but 4,200 bbls.

Charles L. Black, attorney, and E. P. Gregory, engineer, for the Yates pool operators, submitted figures justifying a raise from 41,500 to 70,000 or 75,000 bbls. daily.

Yates Demand

Mr. Black said when Yates was allowed 60,000 bbls. there was no storage but there is heavy demand for its oil now. At one time it was 130,000 bbls. but had been gradually cut down. Mr. Gregory said when it was 89,500 bbls. there was waste but none would occur at this time at 70,000 bbls. But below that figure efficiency would suffer, he said, as there is waste now. He said there had

(Continued on Page 33)

R. D. Parker Made Administrative Chief With Absolute Control in East Texas

AUSTIN, Tex., Apr. 2.—The Texas Railroad Commission has made an important change in administrative personnel designed to give effect to its orders aimed at curbing the flow of illegally produced oil in East Texas.

R. D. Parker, for several years chief of the commission's oil and gas division, was appointed "administrative chief" and will have "absolute control over the East Texas Field with authority to hire and fire employes." He also will continue as chief of the oil and gas divisions. Parker's headquarters will be at Kilgore.

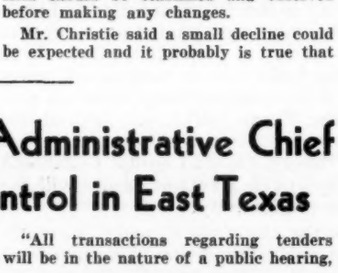
Capt. E. N. Stanley, formerly in charge of commission activities in the field, will become chief engineer with offices in the East Texas Field, and W. F. Knode will continue as chief petroleum engineer with offices in Austin.

Parker will have the "unanimous co-operation of the commission," Lon A. Smith, chairman, and Ernest O. Thompson, member, said. "We are asking for the most hearty co-operation of all the producers, operators and landowners in the field in our campaign to stamp out hot oil, based on the three recently enacted statutes."

Thompson said the "big thing we are doing is giving Parker the right to hire and fire." He will have the authority to pass upon the qualifications of 30 additional employes recently put in the East Texas Field by the commission.

The commission also announced that tenders for the movement of oil will be acted upon by Parker between 10 and 12 a. m.

"All transactions regarding tenders will be in the nature of a public hearing,



R. D. PARKER

with anybody interested to attend and interpose objections. That is so there won't be any foundation for rumors about the granting of tenders," Thompson explained.

Two Plans for Regulation of Refinery Operations Are Now Under Consideration in Washington

By HUGH D. MALLON
Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., April 2.—The question whether refinery operations shall be regulated under the oil code will be considered at a public hearing scheduled for Wednesday, April 4 in the auditorium of the Department of the Interior, to commence at 10 o'clock. It is expected it will be concluded by the end of the week. This brings to a climax the controversy which has been going on for several weeks over this subject.

In announcing the hearing, Harold L. Ickes, oil administrator, said it was called for the purpose of considering (1) the question of refinery control; (2) the plan recommended by the Planning and Co-ordination Committee; (3) the plan proposed by the majors; and (4) to develop all the pertinent data.

The Planning and Co-ordination Committee has recommended that quotas in commerce be established for motor fuel as well as crude, through the use of shipping certificates.

P and C Plan

The text of the Planning and Co-ordination Committee plan follows:

Resolved that this committee hereby reaffirms its recommendations of November 13, 1933, to the petroleum administrator that, in accordance with the petition of the American Petroleum Institute, provisions be inserted in the petroleum code for quotas in commerce in crude petroleum; and the committee further recommends as an incidental and necessary corollary, quotas in commerce for motor fuel.

Resolved further and specifically that in Article 3 of said code Section 5(a) be inserted after Section 5, and that in Article 4 a new Section 3 be inserted in lieu of Section 3 recently stricken out, the sections to be inserted being as follows:

Section 5 (a), Article 3. Upon a finding by the Federal Agency that interstate commerce in crude petroleum or the products thereof is injuriously affected by an excessive supply of crude petroleum in the United States, and that commerce in petroleum and the products thereof is such that any remedy, to be effective in respect to interstate commerce, must incidentally apply in like manner to intrastate and foreign commerce, the Federal Agency may from time to time establish fair and equitable quotas in commerce for crude petroleum from all or any of the states, pools, properties and storage sources in the United States; and while such quotas are in effect no person shall place in commerce or receive in commerce (foreign, interstate, or intrastate) by sale, exchange, consignment or otherwise, any crude petroleum in excess of quota, or any product derived in whole or in part from crude petroleum so placed in commerce in excess of quota. Any violation of this section shall be deemed unfair competition, an unfair trade practice, and a violation of this code.

Before establishing quotas hereunder the Federal Agency shall hold hearings in regard to quotas and such other matters as in the opinion of the Federal Agency may be proper, after such reasonable public notice as the Federal Agency may prescribe: Provided, however, that in any emergency, as determined by the Federal Agency, temporary quotas may be established by the Federal Agency for a period not exceeding 30 days, without previous notice and hearing, but in such event the Federal Agency in the subsequent period shall adjust quotas so as to prevent injustice on the whole.

Section 3, Article 5. Because at this time interstate commerce in motor fuel is injuriously affected by an excessive supply thereof in the United States, and because commerce in motor fuel is such that any remedy restricting supply in interstate commerce, to be effective in respect to interstate commerce, must incidentally apply in like manner to intrastate and foreign commerce, the Planning and Co-ordination Committee may establish fair and equitable quotas in commerce for motor fuel from all or any of the refineries and other sources of supply in the United States, establishing such quotas for operators or groups of plants if deemed necessary or desirable, to the end of balancing supply with demand (for domestic consumption and export); and while such quotas are in effect no person shall place in commerce or receive in commerce (foreign, interstate or intrastate) by sale, exchange, consignment or otherwise, any motor fuel in excess of quota.

In like manner and with like effect such quotas may be established hereafter from time to time when interstate commerce is so affected by excessive supply.

Before establishing quotas hereunder the committee shall hold or cause to be held hearings in regard to quotas and such other matters as in the opinion of the committee may be proper, after such reasonable public notice as the committee may prescribe: Provided, however, that in the present or any future emergency, as determined by the committee, temporary quotas may be established for a period not exceeding one calendar month without previous notice or hearing, but in such event the committee in the subsequent period shall adjust quotas so as to prevent injustice on the whole.

The committee shall promptly hear all complaints in regard to quotas and from time to time shall make such adjustments as may be fair and equitable.

May Appoint Allocators

The committee may appoint district allocators and make use of such associations, regional committees and other agent or agencies it may deem proper to secure compliance herewith.

To aid the enforcement of this section, the Planning and Co-ordination Committee shall issue and furnish to refiners serially numbered certificates in proper denominations and quantities for the movement of motor fuel from refineries

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Broad Experience and Wide Acquaintance Helpful in Russell Brown's Many Duties

The office did not seek the man nor did the man seek the office when Russell B. Brown became secretary to the Planning and Co-ordination Committee and assistant to the chairman, assistant to the treasurer and assistant to the legal committee. The fact is that the office grew up around the man and out of the man. No one else was considered for the position because the office itself seemed a development of his personality.

Mr. Brown, representing the Independent Petroleum Association of America, of which he was at that time counsel, drafted much of the original petroleum code proposed by the Chicago conference. He took a very active part in all the discussions during the formulation of the code and was one of the committee of three appointed to adjust the producers, refiners and marketers sections of the code so that they formed a unified whole. He acted as secretary of the meeting of the independents in the oil industry which preceded the general meeting, acted as secretary of the general meeting, and was secretary of subcommittees during the Chicago sessions. In fact, he has been secretary of so many things that the instinctive action taken by any group of oil men when they get together is to have someone rise up and say, "I nominate Russell B. Brown as secretary."

Helped Formulate Code

When the emergency national committee was organized after the Chicago conference, Mr. Brown was naturally elected as secretary of that body. Confronted with the task of providing all the machinery through which that committee could function, Mr. Brown so promptly organized the work of the committee that many of them never realized that there was any machinery at all. Apparently all they had to do was to get together, make motions and discuss phases of the code and all the mechanical work of translating those motions and those discussions into action just happened. During the hearings on the code, Mr. Brown represented the committee and presented its proposals for discussion. He took little personal part in the various arguments, confining his activities to those which he thought were proper to one who was acting as the committee's representative and not committed to any faction. During that period his usual working day ran from 5 o'clock

RUSSELL B. BROWN

in the morning until 3 the next morning, very often. His humorous comment on his hours was that it was hard for a man to work with the city crowd and the country crowd because the city crowd wanted to stay up until 2 o'clock in the morning and the country crowd got up by sunrise at the latest, so there wasn't much time for a man working with the two groups.

When the code was finally approved by the President, the new Planning and Co-ordination Committee assembled in Washington to take up one of the most difficult tasks which ever confronted the men in the oil industry. The new committee had no arrangements for financing, had no offices and had no clerical staff available. It needed all these things desperately and needed them at once. Over night Mr. Brown formed an organization, provided funds, and once more set up machinery through which the committee might immediately function. It was quite some time after the committee had been organized and in daily sessions before it realized that it did have a very efficient staff which seemed to have been created by simply rubbing some Aladdin's lamp. The committee had elected Mr. Brown as temporary secretary at its first meeting. When the time came for election of officers. Mr. Brown was elected as secretary with the places of assistant to various officers as stated above. His election once more appeared to be the inevitable thing since he had already in his hands all the various threads of the committee's most complicated tasks.

Familiar With All Branches

The first few months of the committee's activities were possibly among the most difficult since no precedents had been set and no routines established. For a long while Mr. Brown read every letter addressed to the committee regardless of its subject, even when these letters mounted to formidable heaps of mail at each delivery. He thus obtained a complete view of the entire industry and its problems such as possibly no other man in its history had ever possessed. Through this system he was enabled to co-ordinate the various departments and work out a method by which the desired results might be achieved with the smallest possible expenditure of time and effort.

Mr. Brown's acquaintance with the personnel of the oil industry is probably greater than that of any other single individual. While producers are commonly well acquainted with other pro-

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or storage at refineries. Such certificates in totals corresponding to the estimated motor fuel movements of the respective refineries, whether in commerce or to storage, for such periods as the committee may fix, shall be delivered and charged to the respective refiners in advance of the periods of their use. From and after March 31, 1934, no persons shall ship or cause to be moved, and no carrier, purchaser or other person shall transport or receive, from any refinery or storage at a refinery, any motor fuel, except when such certificates for the corresponding quantity are used and cancelled. When shipment is made under bill of lading or shipping receipt the certificates shall be affixed to such document. In every other case the person making shipment or delivery shall issue to the carrier, purchaser or other original recipient of the goods a true memorandum of the quantity and affix the certificates to the memorandum. Cancellation of certificates shall be made by the carrier, purchaser or other original recipient of the goods. No cancelled or once-used certificate shall be used again. And at the request of the committee at any time true reports shall be made by refiners of the quantity represented by unused certificates on hand.

The committee may make such rules and regulations and require such sworn reports as the committee may deem necessary to accomplish the purposes of this section.

Failure on the part of any person to observe or comply with any provision of this section or any valid order, rule or regulation hereunder shall constitute a violation of the code.

The petroleum administrator may require quotas established hereunder to be approved by him before they become effective. And any person dissatisfied with a quota fixed by the Planning and Coordination Committee may appeal to the petroleum administrator, the quota to remain in effect pending such appeal, subject to equitable adjustment in the subsequent period to carry out the administrator's decision, in event the appeal is sustained in whole or in part.

Plan of Major Companies

This proposal has been vigorously opposed by the major oil companies on the ground that control of the crude oil supply is the first essential for effective stabilization. The text of the voluntary agreement proposed by the major companies follows:

The undersigned . . . companies are in agreement with the Planning and Coordination Committee and the Petroleum Administrative Board that the present gasoline stocks of . . . barrels are excessive and a threat to the stability of the industry. While they feel that their own gasoline stocks of . . . barrels are no immediate threat to stability by reason of their being securely held and marketed in an orderly manner, yet, as a token of their good will and serious endeavor to rectify the situation, they are prepared to take the following steps, in the hope that the authorities concerned on their part fully realize that the effectiveness of these steps is dependent upon fulfillment of the following fundamental necessities for stabilization:

1. The first essential for any control of any kind in the oil industry is crude oil supply control, which includes production plus stock withdrawals plus imports.

2. The second and only other practical method of regulation is the control of gasoline stocks. In spite of a multitude of collected statistics, no basic data exist today on which gasoline stocks can be regulated. The Planning and Co-ordination Committee and the Petroleum Administrative Board are hereby requested to nominate four experts to sit with four experts hereby nominated by these . . . companies, George H. Taber, Jr., A. E. Pew, Jr., G. H. VanSenden and Noel Robinson, with instructions to ascertain the basic data necessary and, by not later than April 20, 1934, to recommend a suitable plan for regulating gasoline stocks.

Based upon the foregoing and subject to the approval of the petroleum administrator, each of the undersigned . . . companies hereby undertakes for itself alone that pending the completion of the aforesaid plan it will take one or other of the following steps:

(a) Limit its daily average gasoline production from and including the date of this agreement to and including April 30, 1934, to its average daily gasoline production during the first 16 days of March, 1934.

Or (b) reduce its gasoline stocks so that as of April 30, 1934, they will be at least 7 per cent below what they were on March 16, 1934.

Provided, that no company shall be required to take either of the foregoing steps if its gasoline stocks on February 28, 1934, did not exceed 85 per cent of its gasoline stocks on February 28, 1933.

Provided always that no company signatory hereto shall have greater gasoline stocks as of April 30, 1934, than it had on March 16, 1934.

Gasoline production and inventories as referred to herein are to include both finished and unfinished gasoline as defined in the gasoline production allocation order of the Planning and Co-ordination Committee for March, 1934. The production and inventories of each group of subsidiary and/or affiliated companies will be considered in total.

Gasoline stocks are to be reported for the same locations as they are reported to the Bureau of Mines; that is to say, to include stocks at refineries, bulk terminals, in pipe lines and in transit, but not to include unblended natural gasoline.

It is the desire of this group of signatories to co-operate to the fullest extent with the petroleum administrator and the various state regulatory bodies in securing the effective elimination of excess and/or illegally produced oil in the various states and to this end hereby pledge themselves:

1. That neither directly nor indirectly or in any manner whatsoever will they purchase, handle or transport any oil (crude or its products) produced contrary to state of Federal regulations or any oil originating on any property which in any manner produces oil in excess of or contrary to such regulations.

2. Not to purchase from any refiner or producer any product of petroleum which contains in any percentage whatsoever any petroleum or its products which have been produced contrary to the restraints or prohibitions contained in the previous paragraphs.

Each company signatory hereto will render not later than each Tuesday noon to the American Petroleum Institute a telegraphic report showing its average daily gasoline production for the seven days ending the previous Saturday at 7 a.m. and its gasoline stocks on that Saturday at 7 a.m., together with the necessary comparative historical data and, if necessary, such information as will substantiate that it is exempt from steps (a) and (b) under this agreement.

W. R. Boyd, Jr., is hereby made supervisor of this agreement; to check each subscriber's performance; to inform each subscriber weekly on the general performance under the agreement; to report to the Planning and Co-ordination Committee and the Petroleum Administrative Board in any way they desire and to make final decision on any controversial point.

Clash on Cartel

The friction between Secretary Ickes and Attorney General Cummings over the administration of the petroleum code came out in the open this week with the issuance of a statement by Mr. Ickes deploring the action of the United States attorney for the southern district of California in securing the indictment in California of several oil companies and numerous officials of these companies, including K. R. Kingsbury, president of the Standard Oil Co. of California, for alleged violations of the code.

Referring to certain newspaper articles which have inaccurately stated his position with respect to these indictments, Mr. Ickes said:

"To clear up this matter I may say that I do not agree with the policy of the United States attorney for the southern district of California in seeking these indictments. In my judgment this action has not helped the proper and orderly administration of the oil code.

"It is my belief that the cartel which I promulgated in February would have gone far to solve the difficulties of the oil industry in California. It would have done away with destructive price wars. It would have assured against overproduction of crude oil. It would have put the operation of the oil industry in that territory on a profitable basis. By doing these things it would have contributed to the recovery program of the President. These indictments have had the effect of once more throwing the oil industry on the Pacific Coast into a state of chaos."

One immediate effect of these indictments has been the resignation of Mr. Kingsbury from membership on the Planning and Co-ordination Committee. Mr. Kingsbury advised the committee, in submitting his resignation, that this action was based on the indictment of him, the company and several other California oil companies and operators on charges of violating the code. The P and C committee unanimously declined to accept the resignation.

Mr. Kingsbury's resignation was also submitted by Oscar Sutro to the oil administrator, who accepted it, saying:

"I have accepted Mr. Kingsbury's resignation because of his statement that he feels it is the only course open to him as a result of the indictments. I personally appreciate the co-operation he has given to the administration in our mutual effort to stabilize conditions and to promote economic recovery."

Order on Contract Bids

Administrator Ickes has approved an order establishing rules and regulations governing bidding on government contracts and setting up a formula to be followed in such bidding. This order has the approval of the procurement division of the Treasury Department, the purchasing division of the Federal Government, and was promulgated to meet the objections raised by Comptroller General McCarl. Mr. McCarl ruled that only competitive bids could be accepted by the different governmental agencies in awarding contracts. Under the provisions of the code competitive bids were outlawed, but some of the companies disregarded these rules, submitted bids of this type and walked off with the business thereby penalizing those companies which complied with all the provisions of the code. The new rules will effectively stop this practice of encouraging chiseling under the code.

The ruling, signed by the administrator March 29, provides that any person (as such term is defined in the code) selling petroleum or the products thereof to the United States, or any agency thereof, or to any state, territory or political subdivision or agency thereof, must comply with the provisions of Rule 3 of Article 5 of the petroleum code except that a top price may be bid. Rule 3 provides that all sales shall be made at the posted prices applicable to the brand, grade or quality of the commodity sold. Provision is also made for the allowance of discounts from the posted prices for certain commercial consumer sales under this section of the code.

Under the new order of the administrator the top price shall not be lower than 25 per cent more than the posted price on the date the bid is made, less discounts authorized under the code. No contract containing a top price provision shall be made for a longer period than three months. No provisions contained in this order are to be construed to allow discounts from the posted price at filling stations.

The effect of this order will be to allow bidders to submit bids which will permit the government agency or the political subdivision purchasing the com-

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D. D. Wertzberger, Derrick Manufacturer Fatally Hurt in Automobile Accident

Dallas D. Wertzberger, aged 54 years, president and owner of the Wertzberger Derrick Co. of Tulsa, died Monday afternoon from injuries received when his car, in which he was returning to Tulsa from Oklahoma City, turned over on him on a gravel road near Edmond, Okla. Mr. Wertzberger was a colorful figure known to oil men from one end of the nation to the other, and he also enjoyed the acquaintance and friendship of many foreign operators. He had been connected with the rig building and manufacturing industry for 34 years having started with the Elwood Supply Co. in Ohio. Later he joined the force of Oil Well Supply Co. and served in its branches at Sedan, Ohio, and later at Peru, Ind.

In 1903 Mr. Wertzberger moved to Oklahoma and was connected with the Oil Well Supply Co. in various branches in the then active area in the northeastern part of the State that developed so many prolific Bartlesville sand pools.

It was while at Copan, Okla., that Mr. Wertzberger met Col. C. E. Suppes, a prominent rig builder and oil producer, and formed a partnership with him that determined Mr. Wertzberger's future business career. Since that time Mr. Wertzberger has built derricks in every field in the Mid-Continent area and has maintained his headquarters in Tulsa since 1909.

Mr. Wertzberger was born in Decatur, Ind., on July 28, 1880, and is survived by his widow, Mrs. Leona Wertzberger; two daughters, Mrs. H. G. Marqua and Miss Florice Wertzberger, both of Tulsa; a son, Robert J. Wertzberger, who was associated with his father in his business; four grandchildren and three brothers and two sisters.

The deceased was a past potentate of the Akdar Shrine and secretary of the Akdar Building committee and was active in other Masonic work. He was a director and active in the affairs of the International Petroleum Exposition. He belonged to the American Petroleum Institute and was chairman of the derrick committee. He also was a member of Tulsa Mallard Club and the Fin and Feather Club of McAlester, Okla.

D. D. WERTZBERGER

World Oil Supply and Demand to Be Discussed at European Conference by Industry Leaders

By C. O. WILLSON

NEW YORK, Apr. 2.—A renewal of international conferences for the purpose of perfecting a world plan of balancing crude oil supply and demand is indicated in developments here over the past few days. It is understood that discussions have been held by major oil companies regarding the position of the United States in any world plan and it has been agreed that a program is desirable not only from the standpoint of foreign markets but is necessary to carry through to success the domestic program in the United States which has been under way during the past six months.

Although no announcement has been made it is reported that conferences will be held in Europe in the immediate future. W. S. Farish, chairman of the board of the Standard Oil Co. (New Jersey) and R. G. A. Van Der Woude, president of the Shell-Union Oil Corp., left here Saturday for Europe. It is said that Walter C. Teagle, president of the New Jersey Standard, will leave later in the month. He is at present in Washington with representatives of the major oil companies to formally present a plan announced last week to curtail refinery operations with the view of solving the immediate problems centering around a weak gasoline market. He is expected to go to Europe with the completion of the hearing.

Three Dominant Companies

The Dutch-Shell of which the Shell-Union is a subsidiary controlling Shell operations in the United States and the Standard of New Jersey are the two dominant factors in oil production and distribution outside the United States and it is assumed that any program will center around their operations with the Anglo-Persian Oil Co., Ltd., the third private interest involved.

The Standard company has greatly strengthened its position over the past year through its acquisition of the foreign properties of the Pan American Petroleum & Transport Co. and the merger of its Far East producing and refining properties with the vast marketing outlets of the Socony-Vacuum Corp. in the formation of the Standard-Vacuum Oil Co.

The last world conference on oil was held in Europe about a year ago. Other conferences over the past few years had been held in the United States and Europe. While some temporary benefits could be credited to these conferences they failed to result in a workable plan looking toward world stabilization in the oil industry. Russian representatives did not attend the later conferences and others who participated expressed dissatisfaction with the results obtained. The complete breakdown of crude oil curtailment efforts in the United States the fore part of last year with a large increase in production for 1933 was held largely responsible for the collapse in world petroleum markets and ended any plans for international co-operation.

The partially successful efforts of the industry in the United States over the past six months in controlling crude oil production in line with current demand under the direction of the Government has been encouraging to those with a world oil viewpoint and has re-established the hope that something can be worked out on an international basis. It is contended that such a program is more necessary now than ever before.

From the standpoint of the United States it is certain that it will be highly difficult if not impossible to perfect a permanent domestic plan of stabilization unless there is co-operation from the foreign producing countries. The objective of the domestic plan is the balancing of supply and demand with market prices at profitable levels. The danger which has become apparent over the past few weeks is that prices will be advanced to such levels that more and more of the foreign business of refineries and producers will go to other producing countries. The exports of refinery products have already declined more than 50 per cent from their peak and it is feared that the remainder will be lost under a domestic curtailment program unless the co-operation of other countries can be secured.

Recent advices from Europe have indicated that the major producing interests there have also sensed this situation which has for its basis the fact that petroleum products are distributed on a highly competitive world market and it is impossible for any one country whether a producer or consumer to ignore that fact. The recent trend in crude oil production in Russia, Persia, Rumania, Mexico, and some of the South American countries, has been upward. In addition by late summer or fall the production of Iraq will be made available in world markets through the completion of the Iraq pipe line. Rumanian oil interests have been particularly alarmed as to possible competitive conditions in European and Asia consuming markets with the completion of the Iraq line and have suggested conferences with the view of assuring the absorption of this extra oil in an orderly manner.

The Iraq line is controlled by French interests, Anglo-Persian, Dutch-Shell and three American companies, Standard of New Jersey, Socony-Vacuum and Gulf, all of which presumably will be represented at any conferences held. A suggested plan as reported here calls for the allocation of consuming markets taking into consideration the new and old sources of supply with the primary purpose of preventing excessive production at any one point to be dumped on world markets at distress prices.

Texas State Wide Meeting Gives Commission Two Weeks to Stop Hot Oil Production

By L. E. BREDBERG

DALLAS, Tex., Apr. 2.—The Railroad Commission was given two weeks to stop hot oil production in East Texas at a statewide oil conference here sponsored by the East Texas Chamber of Commerce, the Dallas Chamber of Commerce and the Texas Petroleum Council.

Over 200 men, representatives of oil companies, independent operators, chambers of commerce, members of the Texas Petroleum Council and others assembled to discuss the situation. R. L. Thornton, president of the Dallas Chamber of Commerce, welcomed the assembly which was presided over by Hubert Harrison, general manager of the East Texas Chamber of Commerce. Those in attendance signified they were watchfully waiting to see if the Railroad Commission and the attorney general's department could bring sufficient action within the next two weeks to entirely change the situation in East Texas. If this is not done threat was made to ask for Federal control.

Attorney General Allred decried the attacks made against his department and the Railroad Commission and related the troubles his department had encountered in trying to bring violators into court and have them punished. He said injunctions and monetary penalties did not suffice in stopping hot oil production and that "the only effective method of dealing with violators is receiverships." He wanted to see the commission have the necessary powers to prevent overproduction and wanted all producers in the field to produce and act alike with none getting special benefits. At least 1,000 suits have been filed.

His departmnet has four men in the East Texas Field now and another is being added. "We are going to enforce the law and prosecute cases, and if it is possible to dry up hot oil we are going to do it," stated Mr. Allred. "But we need help of the citizens of the State to enforce the laws, and those knowing of violations in the field should give us the facts to help us in our work."

A new suit has been filed in Tyler attacking the recent law enacted at Austin, and Mr. Allred said he would be in Tyler Monday to ask Federal Judge Randolph Bryant that the suit be vacated. Mr. Allred just this week had such a suit vacated in Austin and was commended for his prompt action in that case.

Thompson on Defensive

Col. Ernest O. Thompson, member of the Railroad Commission, defended the commission's record. Lon Smith was not able to be at the meeting and C. V. Terrell, the other member of the commission, is ill in a Houston hospital.

Colonel Thompson said the commission is now busy writing new rules and regulations under the recently enacted law which gives the commission power to inspect refineries and their records. He said he was pleased to have members of the Texas Petroleum Council helping to draft the new orders. He also stated that 30 men had been added to the investigating force in the East Texas Field and that heretofore the organization had been handicapped for lack of finances with which to hire sufficient men. He came out emphatically against Federal control citing incidents that had happened at Washington to make him feel strongly against such control. Texas, however, he said, should go along in harmony with the Federal Government in its work to better conditions in the industry.

Colonel Thompson declared the condition of oil production in Texas was far more satisfactory than in other leading oil states, mentioning Oklahoma and California. He was not afraid of the other states, because Texas had enough oil to drown them into being good. This led to objection by Fred Weeks, attorney for the Texas Petroleum Council, that the drowning would be accompanied by selling oil worth $1 or $1.50 for 10 or 25 cents per barrel.

Colonel Thompson detailed his efforts with a party of Texas officials, aided by Senators Sheppard and Connally to get an interview with Administrator Ickes on a matter connected with Texas oil affairs. It took them two days, he said. "I don't mind that, because he is very busy, and I know he is a great Secretary—the newspapers all say so," Mr. Thompson said. They were later referred by Secretary Ickes to Chairman N. R. Margold, of the Petroleum Administrative Board, he said, and had considerable difficulty in getting admitted. When they did get in Mr. Margold warned them how busy he was.

Senator Connally had a sweeping bow, Mr. Thompson said, and said: "Your majesty, we would not have ventured to intrude into your sanctum sanctorum except that we were sent by the Secretary of the Interior." "And that, gentlemen, is Federal control," Mr. Thompson declared.

Given Two Weeks

Carl Estes, of Tyler, asked that the meeting reconvene April 16 to give the commission a chance to show what has been done to dry up hot oil.

Mr. Estes also wanted to see experienced oil men placed on the field staff of the commission and asked that R. D. Parker, chief supervisor of the commission at Austin, be sent to East Texas and Capt. E. N. Stanley, now in charge of the field forces, be retained in that position.

Fred Weeks, of Tyler, attorney for the Texas Petroleum Council, condemned pipe lines companies that transport hot oil as being just as guilty as the hot oil producers. He held that royalty and landowners who took checks for royalty on excess oil were just as guilty as the violating producers. Railroad companies that accept tenders of oil considered as hot or shipped as topped crude also were condemned by Mr. Weeks. He said tenders were apparently too easy to obtain in the field and he knew of one tender that had Administrator Ickes' name signed to it by some violator.

Federal Control Threatened

Mr. Weeks asked that everyone knowing of violations go into court and testify against the violators, stating that "there will be plenty of hot oil from now on unless everyone reports such violations. Only one citizen was reported as coming into court to assist the attorneys in prosecuting cases against violators. Mr. Weeks said he had seen statements showing legally produced oil that had been paid for at the rate of 90 cents per barrel and that the royalty owners had also received statements

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Manufacture of Chemicals Opens Broad Field for the Utilization of Refinery By-Products

By M. B. CHITTICK
Pure Oil Co.

The problem of finding and developing outlets for the by-products of conventional refining of crude oil is one that is neither new nor unique. Executives and technologists of the petroleum industry have had the problem before them for years and ever since the industry passed its initial period of infancy. There are relatively few of the pioneers remaining today who were not confronted with the problem.

Specifically, at one time the industry was faced with the serious problem of disposing of the by-product gasoline. The manner in which these pioneers faced their problem and reached a solution is best indicated by the fact that today gasoline, or motor fuel, is the major commodity of the industry, and the part they played in making possible the development of that major industry—the manufacture of automobiles.

The solution to many of these early problems indirectly resulted in furnishing the answer to later problems through creating a demand. The development and refinement of automotive transportation created a demand for more and better lubricants. Simultaneously, and with wider distribution of the automobile, came a demand for more and better roads and highways, which in turn created a demand for road building materials. To appreciate what a tremendously large and lucrative business this has meant to the petroleum industry in the past few years one has but to look at the total volume of road oils, asphalts, liquid asphalts and emulsified asphalts, that are consumed annually in road building operations.

The scope of this paper is quite inadequate to enumerate the many problems of the past or to trace their ultimate solution and relation to other problems of the industry. Suffice to say that the pioneers of the industry met these many problems courageously and in their ultimate victory laid the foundation for our present major and basic industry.

Progress has no minimum and maximum limitations.

Political Influence

The past year has witnessed the introduction of a new political philosophy and a new economic philosophy nationally. These have affected the petroleum industry to a major degree. With the adoption of a policy of conservation of our natural resources rapid progress has been made toward bringing the production of crude oil down to balance the demand for finished products. Consequently, readjustments have had to be made in all phases of the industry to compensate for lower supplies of crude. One of the benefits of these changes has been to crystallize, to a greater degree than ever before, thought and action looking toward utilization of ptroleum by-products. The laboratories of the industry are prosecuting their research projects more aggressively than ever and the publication of papers in technical journals and before technical organizations, and the issuance of many patents, bears evidence of progress being made.

The most significant fact indicated, as a result of the successes already attained in utilizing petroleum by-products, is that the petroleum industry has definitely become a major phase of the chemical industry, and the newest developments trend more and more in the direction of chemical utilization.

Quite naturally there have been aggressive efforts to improve the quality of the basic products from crude oil, such as gasoline, lubricating oils, etc., and at the same time to find new uses and applications. These efforts have created new problems of utilizing by-products.

The past two or three years have witnessed an intensive program, popularly referred to as the "octane race," to produce gasoline with higher antiknock properties. The automobile engineer has contributed his share to this by designing motors with higher compression ratios and requiring higher antiknock fuel. In the main this has been accomplished by cracking at higher temperatures and high pressures. Consequently, yields of gas from cracking have increased. The utilization of this tremendous volume of by-product gas is most important.

A large volume of this gas is being employed as fuel and this use is expanding. Many industrial plants employing high temperatures that must be accurately controlled have turned to this gas and revamped, in many instances, their plants to burn gas. Completeness of combustion, ease of control, and higher thermal value recommended refinery gases for this use.

In some instances these highly cracked gases have shown such a high thermal value that they are being used to enrich artificial gas.

Vapor Phase Cracking

The trend toward producing higher antiknock motor fuel has brought about the rapid development of vapor phase cracking. The gas from vapor phase cracking contains a higher percentage of unsaturated hydrocarbons than is obtained from liquid phase cracking. The flexibility of vapor phase cracking permits of ease of control so that the unsaturated hydrocarbons in the fixed gas can be increased with higher temperatures. Further, the lower the pressure the greater the yield of unsaturates. The following analysis of the fixed gas from one of the vapor phase cracking operations is given herewith:

Methane and hydrogen	41.5%
Ethylene	27.2
Ethane	14.3
Propylene	13.5
Propane	2.7
Heavier	0.8
	100.0%
Fuel value	1,650 B.t.u. per lb.

This analysis indicates very clearly the possibilities of chemical utilization of this type of gas as a source of raw material.

Economic conditions have made it imperative for many chemical manufacturers to seek a source of raw material obtainable at lower costs. It is obvious that a manufacturer requiring ethylene, propylene, or butylene can obtain these from the petroleum industry at costs more economical than from former sources.

Patents have been taken out covering the production of ethyl alcohol made from ethylene from cracked gases and this alcohol is being produced commercially. The repeal of the eighteenth amendment in this country is creating a shortage of ethyl alcohol from the usual sources so that the production from petroleum gases will undoubtedly be given considerable impetus.

The chemical utilizations of these highly cracked petroleum gases are graphically shown in Table No. 1.

Considerable research work has been done and commercial units installed, for the production of a synthetic motor fuel from cracked gases with a high content of unsaturated compounds. An outstanding characteristic of this fuel is its very high antiknock properties.

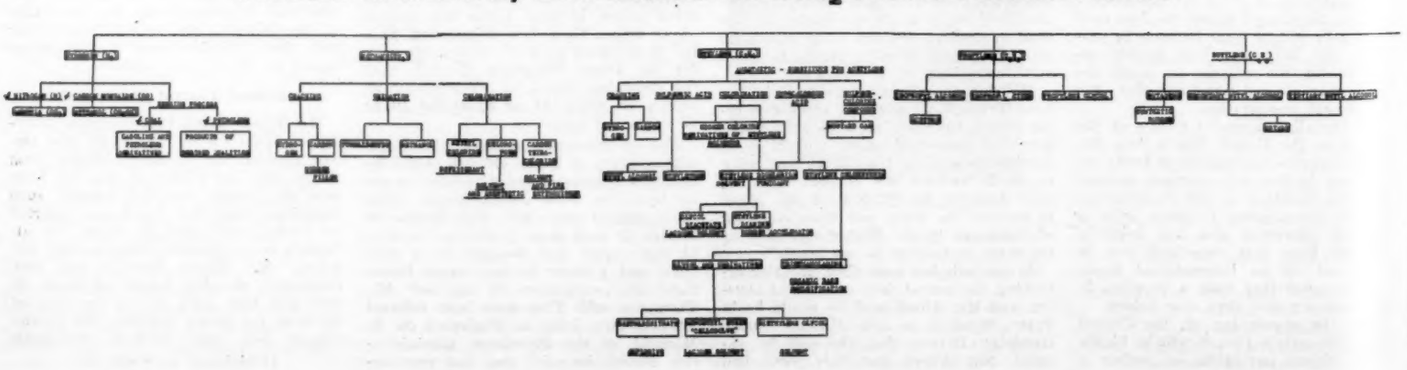
The petroleum industry has entered the plastic field by way of synthetic resins and gums from highly cracked hydrocarbon gases.

The task for the chemist in connection with refinery gases has been simplified to the extent that the chemical constituents that go to make up the gases are relatively easy to determine not only qualitatively, but quantitatively as well. The next step in utilization was development of satisfactory means of separation, either physically or chemically. Here the distillation engineers have entered the problem with designing of equipment for the fractional distillation of these gaseous hydrocarbons under pressure.

The increase in cracking temperatures and pressures to secure higher antiknock gasoline has introduced another by-product other than gas. These higher cracking temperatures and pressures have resulted in the formation of highly unsaturated and unstable hydrocarbons of the diolefine series in the cracked distillate. It is necessary to remove these compounds from the gasoline before it can be used as they have the property of combining to form high boiling sticky material which would be deposited in a motor, causing valve sticking and carburetor difficulties. These compounds are polymerized with some catalytic agent, as fuller's earth or sulphuric acid, and dropped out of the gasoline as a heavy dark liquid residue, known as polymers. Characteristic of this product is its drying property. This property is due to the ability to absorb and react with oxygen in the same manner in which linseed oil dries. As a result, this product is finding use in the paint and varnish industry, core oils, or wherever a drying or semidrying oil is indicated. Due to the complex nature of these polymers little is known as yet of the exact chemical constituents in them, and as further results come from the research laboratories indicating these constituents, a more general and wider application of their use should be found.

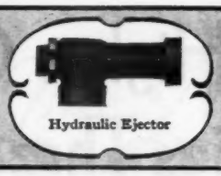
Faced with the economic problem of utilizing these many by-products of the petroleum industry, with the research laboratories attacking the various problems more intensively, and the economic demand from other industries for sources of more and less expensive hydrocarbons, we may reasonably expect within the near future an even greater union of the petroleum industry to the chemical industry.

Products Which May Be Manufactured from Cracked Petroleum Gases



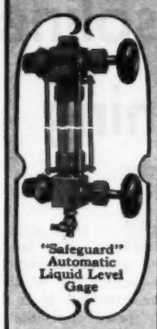
ALBERTA GASOLINE TAXES

EDMONTON, Alberta, Apr. 2.—Official figures recently given out by the provincial government show that from 1929 to 1933 inclusive, the Alberta revenue from automobile and gasoline taxation amounted to $16,918,901 and in the same period $16,550,296.90 was spent on highway construction and maintenance. Of the revenue total, $8,869,129 was from motor licenses and $8,049,772 from gasoline tax.


Hydraulic Ejector

PENBERTHY PRODUCTS

Steam Ejector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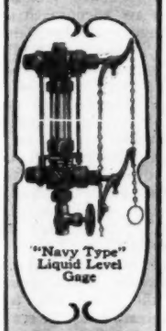
Automatic Injector

"ALL IRON"
LIQUID LEVEL GAGE
FOR 500 LBS. WORKING PRESSURE AT 750° F.


"Navy Type" Liquid Level Gage

Gas Engine Lubricator

PENBERTHY PRODUCTS

HERE is a liquid level gage that is ideally suited to the difficult service requirements of the oil industry. It is made from a special high strength alloy iron and is of exceptionally rugged construction throughout. It is used wherever the liquid handled makes iron preferable to brass, and is recommended for working pressures to 500 pounds per square inch at 750° F.

The Penberthy "All Iron" Liquid Level Gage is automatic in operation. Ball check valves in both the upper and lower body close immediately and positively to prevent the loss of liquid when the glass is broken; the hand operated stop valves may then be closed with safety and a new glass inserted. The drain cock is integral with the lower gage body and is provided with thread for drain connection.

Penberthy Liquid Level Gages are carried in stock by supply houses everywhere.

"All-Iron" Automatic Liquid Level Gage

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Spring Compression Grease Cup

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Industry Winning Fight Against Higher Gasoline Taxes With New Types of Levies Threatening

By C. O. WILLSON

NEW YORK, Apr. 2.—The oil business appears to have won the first round of its fight to secure a more equitable distribution of the tax burdens of this country, an objective which in its accomplishment, will mean a substantial reduction in its tax payments which now total in excess of $2,000,000,000 yearly. While the optimism may prove to be premature, in the case of two or three states the success of the past few months in preventing additional state taxes has given rise to the hope that the upward trend in state gasoline tax levies has been definitely stopped.

Many state legislatures have been in session since the first of the year and in most cases one or more bills have been introduced to increase the present rate of tax but so far none of these bills has become a law. This development was apparent last year, evidenced by the fact that state gasoline taxes for the entire country in 1933 were slightly less than in 1932 despite a 1 per cent increase in domestic demand. Oregon was the only State to increase its gasoline tax last year.

Total gasoline taxes were higher last year than the year before due to the Federal tax which was 1 cent per gallon the first half of the year and 1½ cents the last half. In regard to the Federal tax which became 1 cent again the first of this year it is worthy of note that substantial support was obtained in the present session of Congress for dropping the tax entirely. Due to the requirements of the Federal Government as regards revenue it is probable that the 1-cent tax will be continued over another year but those in touch with this situation are hopeful that the tax can be ended as soon as the present emergency is over.

Opposition to Tax

The fact that the state gasoline taxes have not been increased at a time when legislatures and politicians everywhere are looking for additional sources of revenue to meet increasing expenditures and reduced revenue from other sources of taxation, apparently reflects the fact that motorists are at last beginning to realize the size of the tax together with the abuses that have developed in the spending of the huge funds.

Sentiment Aroused

Thousands of clippings at the local headquarters of the American Petroleum Industries Committee, the tax division of the Institute, show that newspapers from the smallest weeklies to the largest dailies are practically unanimous in their condemnation of any plans for increasing the gasoline taxes. With few exceptions they also are opposing the increasing tendency to divert the tax funds from their original purpose of building and maintaining improved highways. Various local and national organizations which directly or indirectly represent the car owners, also are taking positive positions against higher gasoline taxes and their representatives have in many instances appeared before legislative committees and made known their attitude. Such national organizations as the Legislative Committee of the U. S. Chamber of Commerce, the National Grange, the National Farmers Union, the Illinois Agricultural Association and several state legislatures have announced their opposition to the continuance of the Federal gasoline tax.

Automobile associations are more active than they were in opposing new taxes and seeking reductions. They have been especially concerned with the diversion of funds including registration fees and gasoline collections from the highways to the special uses which now total in excess of $100,000,000 yearly, or approximately 20 per cent of all the state gasoline tax funds. While this diversion is condemned by all oil companies, some observers believe it is weakening the position of those who are responsible for the present high tax rates. The diversion is bringing opposition to the tax from new sources and it has detracted from their old stock in trade argument to the effect that the oil companies and automobile manufacturers should not oppose the tax because all the money was being used to build better highways which tended to increase the demand for cars and widen the consumption of motor fuel.

Educating Investors

The work of several oil companies in calling the taxes to the attention of their customers in their radio broadcasts is known to have had a favorable reaction from their customers many of whom have stated that they previously had not realized the amount of the tax in their gasoline purchases. In this connection there has been some discussion of a plan to extend this into all newspaper advertising, the oil company to call attention to the high tax rates in a single sentence or paragraph at the conclusion of their regular advertising material. This would be coupled with a more aggressive campaign at the service station.

Tens of thousands of investors are being made aware of the significance of gasoline taxes in relation to the profits of the companies in which they are interested through the annual statements. The recent statements of the Texas Corp. and the Gulf Oil Corp. are examples. The Texas Corp., in its statement for 1933 says in part:

"Gasoline taxes paid by your company or accrued during the year amounted to $59,661,675.29. This tax on the average exceeded the refinery wholesale price of gasoline and amounted to approximately 43 per cent of the retail price exclusive of the tax. This burden on the motorist continues to retard the consumption of gasoline. Originally intended purely as a highway tax, it has grown to such proportions that two evils have resulted: One, is evasion, and the other, diversion to other purposes."

The Gulf statement said in part: "Again we must call attention of our stockholders to the staggering burden imposed by the high gasoline taxes still in effect. The total gasoline taxes collected by the marketing divisions of your companies amounted to $47,367,707 and constitute a direct sales tax equivalent to 58.08 per cent of the net price realized. Attempts are being made constantly to increase these taxes notwithstanding the fact that they are already so high that evasion of gasoline taxes exists on a large scale. As a result all companies like the Gulf companies which scrupulously pay these taxes, are severely penalized in the shape of material reduction in income. We urge the active aid of stockholders not only in combating any proposed increase in gasoline taxes but in encouraging any efforts that may be made to reduce them."

Both these companies lost money in their 1933 operations. Fifty per cent of the money paid out by these companies in gasoline taxes would have placed them on a substantial earning basis. The remaining 50 per cent accruing to the Federal and state treasuries would have constituted their share of all the funds actually needed for the construction and maintenance of improved highway systems in the areas in which they market. Both statements in stressing the evasion angle, point to the great danger of high gasoline taxes to the oil business. Investigations have shown that invasion of the state and Federal taxes is usually tied in with price cutting in tank wagon and service station prices. The bootlegger, having a price advantage which in most cases is the equivalent of the refinery return on the gasoline, is in a position to offer any price concessions necessary to obtain distributor and consumer business. This naturally tends to reduce the entire market structure below the profit levels of the bulk of the industry whose operations are conducted on a legitimate basis.

Those who are in close touch with the gasoline tax situation are encouraged by the strong front offered to higher rates and are hopeful that in the near future this rising tide of opposition will continue to the point where lower rates can be brought about. Preparations are now being made to vote on a reduction in the Michigan tax from 4 cents to 2 cents. This campaign, which will be watched with great interest by the oil companies, is sponsored by the Michigan Automobile Association which in the same referendum will seek to have the registration fees lowered.

The public attitude was indicated recently in the protest of Birmingham, Ala., citizens when the 1-cent city tax on gasoline was increased to 2 cents with a 2 cents per quart tax on lubricating oil. A storm of protest arose culminating in a petition bearing 7,000 signatures which brought about the repeal of the ordinance two weeks after it became effective.

New Taxes Loom

While the situation in regard to gasoline appears to be improving weekly, developments throughout the country show that the oil business still has a long battle ahead to protect itself in regard to taxes and other legislation which, if made effective, will in one form or another cripple operations. Reports from the constantly widening operations of the American Petroleum Industries Committee reflects this situation. This organization which now maintains a large staff here with field representatives is constantly aiding in fighting unfavorable legislation and rulings extending from the smallest political unit to the Federal Government.

In regard to taxes there is a trend in the collection of taxes which has brought new problems. Due to the opposition on the part of the public to any tax or fee which involves a large payment at one time the tendency is to extend the application of the various forms of sales tax. The reductions in ad valorem taxes which are usually paid in two lump payments reflects this situation. It is apparent also in the attitude toward car registration fees. The automobile people are making considerable progress in securing reductions in registration fees. This is due to the fact that these yearly fees amounting from $10 to $75 or more must be paid at one time. The truth of the matter is the average registration fee is much less than the average yearly Federal and state gasoline tax collections. The average registration fee in 1933 was approximately $20 per car, while the gasoline taxes averaged $32.50 per car.

Despite this difference the automobile manufacturers have been able to convince legislative committees that the registration fees should be lowered while at the same time they have entirely ignored the pleas that the gasoline rates be reduced. A case in point is the present situation in Ohio where a bill to increase the gasoline tax from 4 cents

Administrator's Report on Crude Stocks

Stocks of domestic and foreign crude petroleum at the close of the week ended March 24 totaled 340,081,000 bbls., an increase of 1,094,000 bbls. from the total of 338,987,000 bbls. on hand at the end of the preceding week, Harold L. Ickes, Secretary of the Interior and administrator of the code of fair competition for the petroleum industry, announces. This increase, which follows a gain in stocks of 496,000 bbls. during the previous week, comprised an increase in stocks of domestic crude oil amounting to 1,232,000 bbls. and a decrease in stocks of foreign crude of 138,000 bbls.

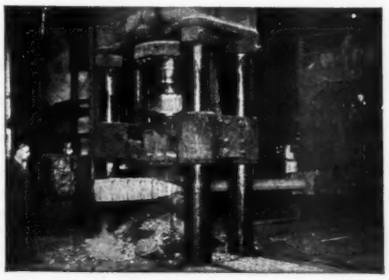
Current reports of the oil industry indicate that crude oil production increased approximately 10,000 bbls. over the previous week, or from a daily average of about 2,445,000 bbls. for the week ended March 17 to 2,455,000 bbls. for the week ended March 24. The daily average crude runs to stills declined substantially, amounting to 2,310,000 bbls., as compared with 2,410,000 bbls. for the previous week. Daily average crude imports continued to decline, amounting to 49,000 bbls. as compared with 60,000 bbls. for the week ended March 17.

CRUDE PETROLEUM STOCKS REPORTED BY COMPANIES HOLDING 100,000 BBLS. OR MORE

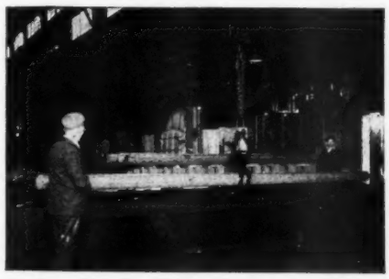
Grade of crude oil—	Stocks held by reporting companies Mar. 17, 1934 (bbls.)	Stocks held by reporting companies Mar. 24, 1934 (bbls.)	Change from Mar. 17, 1934 (bbls.)
Pennsylvania Grade	5,021,000	4,966,000	—55,000
Other Appalachian, including Kentucky	1,347,000	1,349,000	+2,000
Lima, Northeast Indiana, Michigan	1,571,000	1,607,000	+36,000
Illinois, Southwest Indiana	11,204,000	11,292,000	+88,000
North Louisiana and Arkansas	11,423,000	11,368,000	—55,000
West Texas and Southeast New Mexico	30,472,000	30,422,000	—50,000
East Texas	43,582,000	43,663,000	+81,000
Other Mid-Continent	154,308,000	154,967,000	+659,000
Gulf Coast	15,266,000	15,517,000	+251,000
Rocky Mountain	27,584,000	27,584,000	0
California	33,619,000	33,894,000	+275,000
Total domestic crude	335,397,000	336,629,000	+1,232,000
Foreign crude	3,590,000	3,452,000	—138,000
Total crude	338,987,000	340,081,000	+1,094,000

The New BRIDGEPORT DRILL COLLAR

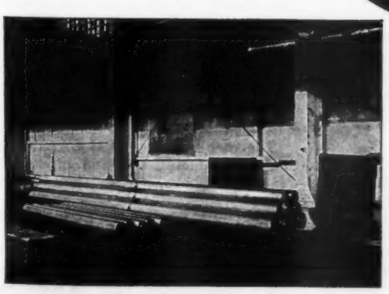
The ultimate in weight—stiffness—strength and safety for straight hole drilling.



Forging 12-inch square steel billet, from which a Bridgeport 30-foot Drill Collar is to be made. This entire forging operation is done in one heat of the steel.



30-Foot Bridgeport Drill Collar forgings going into the normalizing furnace. This treatment is done at one single operation in these mammoth car-type, over-and-under, gas fired, thermostatic controlled furnaces.



Bridgeport Drill Collar forgings, rough turned, ready for the inside boring operation. Forgings shown are 30-foot and 12-foot.

30 FEET LONG

CHROME NICKEL STEEL

COMPLETELY and UNIFORMLY HEAT-TREATED

(Heat-treated the entire length at one operation.)

As weight and stiffness are prime requisites in a Drill Collar, our collars are constructed with the largest practical outside diameter.

(In making comparisons, don't overlook checking the weights.)

We also manufacture and distribute Forged Steel Fully Normalized Drill Collars.

Both types are carried in stock in 20-foot, 24-foot and 30-foot lengths.

For immediate delivery, contact our nearest representative or branch store, or 'phone or wire.

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OIL DRILLING-FISHING AND PRODUCTION EQUIPMENT

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to 6 cents and reduce the car registration fees to $1 flat on automobiles and $2 on commercial vehicles has substantial support. In Kentucky where the car registration fees have been lowered they are proposing to increase the gasoline tax with taxes on lubricating oil. It is said that the only possible way to nullify the efforts of politicians in their plans to shift the burden of taxes from real estate and other property to special taxes in which small payments are made throughout the year, is to bring forcibly to the attention of car owners in the case of gasoline, that their present taxes are already excessive and burdensome.

Another angle to this problem is the spread of sales taxes. Due to the fact that the oil business already pays a sales tax far greater than any other essential industry, gasoline distributors are entitled to exemption in these special sales levies of 1 to 3 cents which are becoming popular in several states. It is necessary, however, to secure this exemption in the bill before it becomes a law if this additional levy is not added to the present average sales tax of approximately 43 per cent. Taxing agencies are also considering the possibilities of motor oil taxes, greases, chain store taxes to include filling stations and various license fees. The recent Federal Court decision holding filling stations exempt in the application of the West Virginia chain store tax has been encouraging to the oil companies, although a similar tax in Indiana has been held to apply to the distributing end of the oil business.

Restricting Demand

Other proposals many of which have strong support although they have not reached the legislative stage at this time are dangerous from the standpoint of reducing the demand for petroleum products. The coal people have sponsored a tax on natural gas and have suggested regulations covering the use of oil designed to widen the demand for coal as fuel with a corresponding decrease in the utilization of oil and gas.

The second report of Joseph E. Eastman, Federal co-ordinator and transportation, is interpreted as an opening gun to restrict the operation of motor driven units in the field of transportation. His report calls for Federal regulation of transportation agencies other than railroads and suggests legislation authorizing the Interstate Commerce Commission to investigate the need for Federal regulation of motor carriers, both common and contract, including the regulation of rates, fares and charges such as are now applicable to rail carriers.

The American Petroleum Industries Committee which is in close touch with the situation at Washington states that the Eastman legislation differs in major particulars from the Rayburn bill but carries Federal regulation of highway transportation far beyond that contemplated or so far advocated by highway interests. Motor buses and trucks are the largest per unit users of gasoline and oils and collectively represent a substantial percentage of the total business in this country and any regulations which would restrict their operations would be a serious blow to the oil industry.

SWITCH TO SUMMER OILS

The Standard Oil Co. of Indiana will use U. S. Weather Bureau records as far back as 50 years to demonstrate to motorists the wisdom of changing to a heavier grade oil in warmer weather.

Temperature charts based on U. S. Weather Bureau records show that the average temperature in years past has been for a given area and indicate what temperature may be expected in the coming few weeks. In order to correlate the charts properly with the climatic conditions in a particular area, the campaign will open in the southern states in the company's territory on March 29. Two weeks later it will start in the central states and a month later in the northern states.

Two Plans for Regulation of Refinery Operations

(Continued from Page 9)

modity a base figure which may be used for budgetary purposes. The establishment of the maximum figure, namely, 25 per cent more than the posted price on the day of submission of the bids, sets this base. It is felt that over a three-month period the tank wagon price of petroleum products will not be increased over 25 per cent, and that the regular tank wagon price, less applicable discounts, may be used as the basis of the sales under the contract.

Oil Bill Waits for President

Legislation for the control of the petroleum industry has been held up pending the return of President Roosevelt from his vacation. The bill drafted by the administrator and his staff is now on the President's desk awaiting his approval. The time before Congress is expected to adjourn is getting short, and if this measure is to be passed at this session it will be necessary to get prompt action in both branches of Congress. Due to the short time left it is expected that the bill will be a general grant of power to the administrator, and that controversial issues such as pipe line divorcement will not be included. It is understood, however, that provision will be included giving the administrator power to regulate pipe line operations and to investigate practices of petroleum transportation agencies.

Crescent Pool Hearing

Administrator Ickes has announced that because of the inability of operators in the Wilcox sand horizon area of the Crescent Pool in Logan County, Oklahoma, to agree on a plan for developing the area, the Petroleum Administrative Board will hold a hearing on April 10 in Washington.

The administrator explained that under the code, and to assure the orderly development of possible oil-bearing lands, operators were required to submit plans for developing new pools to him for approval. This provision was recommended by the industry to permit conservation of new fields.

The following companies and operators in the Crescent Pool have been invited to present their views at the hearing which will be conducted by the production division of the Petroleum Administrative Board: Minnehoma Oil & Gas Co.; Sinclair Prairie Oil Co., Skelly Oil Co., Phillips Petroleum Co., Amerada Petroleum Corp., Continental Oil Co., Mid-Continent Petroleum Corp., Stanolind Oil & Gas Co., Eason Oil Co., T. B. Slick Estate, Magnolia Petroleum Co., F. A. Rittenhouse, Carter Oil Co. and the Texas Co.

Progress on Agreements

The marketing subcommittee of the Planning and Co-ordination Committee has been making a tour of the Mid-Continent area getting signatures to the pooling and marketing agreements. In Texas it is reported that much progress has been made in getting support for these agreements and that numerous signatures will be forthcoming from this section. A few days ago in Chicago a stride forward was taken when a supplemental agreement to the marketing agreement was agreed to. This action was taken to meet the wishes of Mid-Continent marketers and as a result more support has been given to this matter than previously.

However, it is felt that unless the Pacific Coast cartel modifications are revised by the Department of Justice and made to conform with the wishes of the industry that no definite action on the marketing and pooling agreements will be possible.

Code for Puerto Rico

The approval of an oil code for Puerto Rico, to stabilize and improve marketing conditions and to increase the earnings and shorten the hours of employes, has been announced by the oil administrator.

The code was recommended to Administrator Ickes by the Petroleum Administrative Board, which he established to assist and advise him in administering the national oil code. It was formulated after an investigation and hearings in Puerto Rico, conducted for the administrator by Norman L. Meyers, secretary of the board.

A minimum wage of 30 cents an hour was set for employes in the marketing division of the industry. While this is less than the 40-cent minimum for the United States, it is considerably higher than the prevailing wages. The working week was set at 40 hours, with the code requiring payment of time and one-third for overtime in the limited instances when overtime is permitted.

The hours of retail filling station employes will be reduced substantially by the code, which fixes the maximum at 60 hours weekly and stipulates that these employes shall be paid not less than $8 a week. Such employes at present work many more hours. Representatives of the Puerto Rican employes and of the NRA Labor Advisory Board approved the wage and hour provisions as eminently fair and as providing for a substantial improvement in labor conditions.

Although some of the larger distributors objected, the Puerto Rican code provides that sales of gasoline to consumers shall be for cash. The large majority of retailers and distributors asked that the cash sales provision be included.

Amendments to Federal Revenue Bill Taxing Motor Fuel, Oil and Crude

WASHINGTON, D. C., Apr. 2.—The Finance Committee has reported the Revenue Bill of 1934 to the Senate, including the new language of Section 603 relating to the gasoline and lubricating oil taxes. Section 603 has been completely rewritten and the following changes from the House bill have been made:

The definition of gasoline (taxed a cent a gallon) has been amended to tax all naphthas unless sold specifically for a nonmotor fuel use. This provision will go far in eliminating the tax loss that has resulted from the diversion to motor fuel uses of so-called industrial naphthas sold tax free under such names as "painter's naphtha," "cleaner's naphtha," etc.

The provisions of the House bill requiring registration and bonding of all manufacturers and producers of gasoline and lubricating oil have been retained. In addition, the commissioner is authorized to revoke the registration, and right to buy tax free, of any manufacturer or producer who is guilty of tax evasion. It is believed that these provisions will be sufficient to insure collection of tax due from irresponsible and fly-by-night manufacturers and producers and to eliminate the abuse of the tax free sales which in the past has resulted in considerable loss of revenue.

A provision has been inserted providing for the furnishing of information from Federal returns to state officers. It is believed that this provision will result in more effective co-operation between Federal and state officers in the enforcement of their respective gasoline and lubricating oil taxes. Information furnished by state officers has been helpful in enforcing the Federal taxes, but under existing law Federal officers are not permitted to reciprocate.

Substantial additional revenue is expected from the provisions contained in the bill as reported through the prevention of tax evasion in respect to these taxes.

Producers Tax on Crude

The House bill imposed a tax on the production of crude petroleum at the rate of one-tenth of 1 cent a barrel, payable by stamp. The section has been rewritten to provide for imposition of the tax on sale by the producer, the tax to be withheld or collected by the purchaser and paid over by him to the United States. In cases where the producer himself removes the petroleum from the place of production or disposes of it otherwise than by sale, the producer is required to return and pay the tax. This system is believed to be more workable than the stamp tax.

The provision for transferring the burden of the tax in the case of existing contracts has been eliminated as unnecessary because of the low rate of the tax. An exemption is inserted in favor of crude petroleum produced from any well which is not capable of producing more than 5 bbls. per day. The effective date is made the thirtieth day after the date of the enactment of this act.

Tax on Refining

This section imposes a tax of one-tenth of 1 cent a barrel on the first refining or processing of crude petroleum and a like tax on gasoline produced or recovered from natural gas. For the reasons given above (Section 604), the provision with respect to existing contracts has been eliminated. The effective date has been postponed to the thirtieth day after the date of the enactment of the act.

Depreciation and Depletion

Subsections (a) and (b) (1) prescribe as the general basis for computing depreciation and depletion allowances the basis for determining gain upon the sale or other disposition of property. Since in some cases the basis for determining gain differs from the basis for determining loss, it is necessary to specify definitely which of these bases is to be used for depreciation and depletion purposes.

Subsection (b) (2) and (3) contain clarifying changes to make it plain that depletion is actually allowed under Section 23 instead of Section 114. Your committee made no change in these paragraphs of the House bill.

Foreign Tax Credits

The committee recommends the restoration of the limitation permitted under existing law. It is believed the restriction in the House bill places an undue burden upon income from foreign sources. Under the House bill an exporter or trader is at a serious disadvantage by reason of the necessity to pay taxes to two governments on the same income, the total amount of which taxes may be greatly in excess of the taxes paid by his foreign competitor.

Test of New Texas Law Begun in Federal Court

TYLER, Tex., Apr. 2.—Randolph Bryant, Federal district judge, today granted a three-day delay to permit plaintiffs and the State time to prepare for a hearing on the State's motion to dismiss application for an injunction restraining enforcement of recently enacted legislation designed to tighten oil production enforcement regulations.

Judge Bryant explained he did not intend to permit any extensive delay which could be used "for the purpose of running some more 'hot oil'."

The case was that of the Arrow Refining & Producing Co. and others versus H. H. Welborn, Gregg County district attorney, and others.

The court warned the plaintiff's attorney that he intended to uphold the new law if it could be shown to have a reasonable relation to the Railroad Commission's unquestioned right to conserve the oil resources of the State and regulate production of crude.

Suit has also been filed by the Iowa Brokerage Co. before Judge Bryant.

In a Nutshell—Cracking

"—this unit (topping, Dubbscracking, Dubbsreforming) was specifically designed for a high gasoline, low fuel oil yield and to produce a fuel oil of suitable pour point, carbon residue and viscosity to be marketable at a remunerative price—"

Description of Shell Montreal refinery,
—NATIONAL PETROLEUM NEWS

High yield of high octane gasoline; low yield of high quality fuel oil—that spells profit

Dubbscracking is the way to spell it

Universal Oil Products Co
Chicago Illinois

Dubbs Cracking Process
Owner and Licensor

A HERCULES Casing Head
Used on the WORLD'S DEEPEST Producing Well

We congratulate Mr. R. G. (Bob) Rapp, President; Mr. Hugh E. Rapp, General Superintendent and actually in charge of drilling the world's third deepest well; Mr. H. M. Robinett, Production Superintendent, and the crew of the Denver Producing and Refining Company on their outstanding accomplishment and courage in drilling the world's deepest producing well—their No. 1 A-Dah-Noe, near Binger, Caddo County, Oklahoma, as well as running into this well the world's longest string of casing.

We are grateful that the HERCULES Casing Head (illustrated on the left) is accredited with having played an important part in the hook-up and completion of the well, and we are proud of the fact that a HERCULES Casing Head was selected to support the world's longest string of casing and to pack off between the casing.

A HERCULES tool is the result of definite, constructive engineering and quality material, precisioned machined, combined with years of practical service.

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Write for Bulletin No. 6

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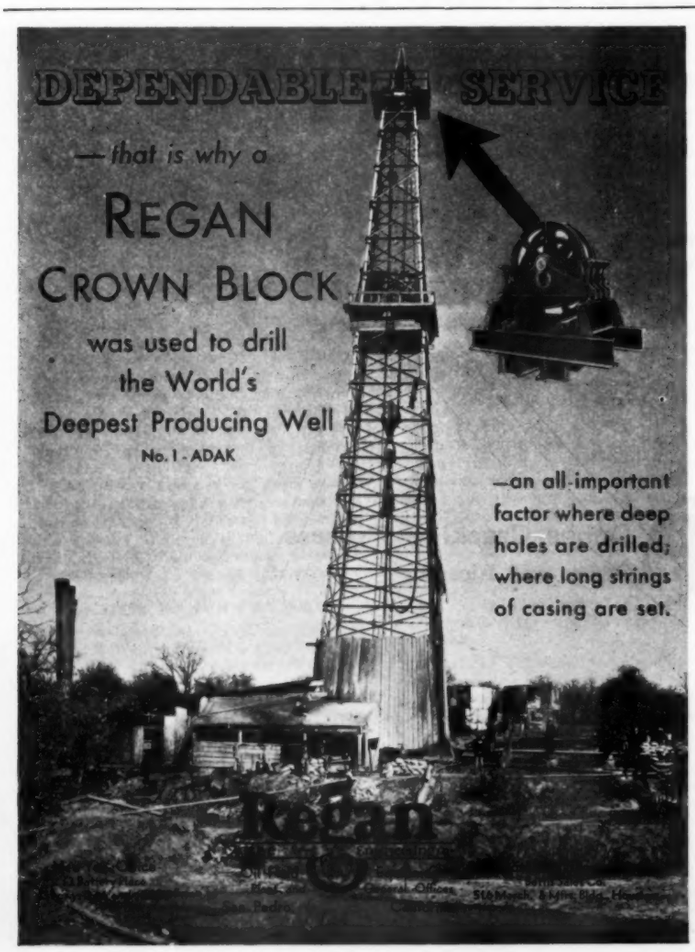

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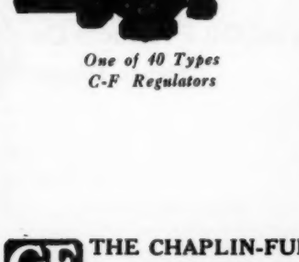


One of 40 Types C-F Regulators

THE Fulton Low-Pressure Regulator can be fitted with new valve seats if desired, with the body of the regulator remaining undisturbed in the line. Plain directions will be mailed to any user on request. This regulator is capable of taking relatively high inlet pressures and reducing to the correct pressure for use. If the purpose is to deliver a very low pressure, the diaphragm surface is made very large so that the regulator becomes highly sensitive to any variation at the outlet and adjusts itself to compensate. Action is exact, positive and sure. Changes of pressure on the inlet side are therefore without effect on the delivered pressure. If gas supply should fail, automatic cut-off is provided. This Regulator is easy to install, never sticks, gives unfailing satisfaction. One of a line of regulators for all needs of gas control which has been known and approved for forty years. Catalog and other printed matter mailed on request.

CF THE CHAPLIN-FULTON MANUFACTURING CO.
28-40 Penn Avenue, Pittsburgh, Pa.

FULTON
Low-Pressure Regulator

Experience Gained in Drilling Wildcat Well at Binger, Okla., Adds to Drilling Technique

By L. G. E. BIGNELL
Petroleum Engineering Editor

The wildcat test of the Denver Producing & Refining Co., No. 1 A-dah-noe, in the C NW SW SW Section 34, Township 10n, Range 10wim, about 6 miles east of Binger, Caddo County, Oklahoma, is still somewhat of an uncertainty as far as its productivity is concerned. Bailing has been carried down to the bottom of the hole and all settlings of mud, debris and cement removed but still the well does not flow. It cannot be classified as a nonproducer until further work has been done on the hole. In the Oklahoma City Field when formation pressures dropped below the pressure built up in the hole by a column of heavy mud difficulty was experienced in completing the wells.

It now appears that the mud used in filling the well before cementing may have been forced back into the formation, and the formation pressure is not high enough to remove this seal of mud, and perhaps some cement, from the face of the hole. On Tuesday morning, April 3, after the well had been shut in for about 19 hours the top pressure gauge registered 500 pounds. The valves were opened and the well made a flow of gas for about one minute, and then flowed oil for another five minutes and having cleaned itself again went dead.

A column of oil 9,982 feet high of 38° A.P.I. gravity would exert a pressure against the formation in the hole of about 3,693 pounds per square inch. Adding the 500 pounds gauge pressure to this would indicate that the formation pressure is around 4,000 pounds but the volume of gas is not sufficient to move the oil through this great height and the well therefore fills up when shut in but will not flow through the string of 6⅝-inch casing with which the hole is finished.

The Denver Producing & Refining Co. officials have ordered the connections at the well head removed down to the 9-inch valve and are reinstalling the Baash-Ross blowout preventer on the 6⅝-inch casing and intend to swab the well to see if this will bring it into production. If swabbing is not successful it is planned to then go into the hole with tools and drill deeper and try to enlarge the hole. As a last recourse the bottom of the hole may be shot with nitroglycerin.

It seems quite apparent that the formation contains oil and gas but there have been several unusual circumstances connected with the drilling in and completion of this well in an unknown area and much still remains to be done before a commercial producer is assured the owners. However, the well is by no means condemned at this time because of its failure to flow its production naturally when first tested.

Drilling In

After the cement set for seven days, or from March 11 to March 18, the 4½-inch drill pipe was again strung up and the top plug drilled out at about 7,908 feet below the surface. While the holes in the special collar used for the multiple stage cementing were closed with the cement that had been forced into the annular space behind the casing it is known that this in no way weakens the string of casing because it has already been tested to more than 6,400 pounds hydraulic pressure after the cement had set.

After the plugs in the upper part of the casing were drilled out the hole was filled with mud and the drill pipe again strung up to drill out the bottom plugs and into the formation. For this purpose a Hughes Tool Co. 5⅞-inch three-cone bit was used and this bit left the bottom of the casing and passed into the cement plug in the open hole and drilled about 1 foot of additional hole, or from 9,982 to 9,983 feet.

After this drilling-in was done it was hoped that the well would clean itself by the release of formation pressure when the upper portion of this mud fluid column was removed by bailing.

An ordinary dart bailer was used for this bailing with three-quarters inch Union Wire Co. line; 5,000 feet of this size line was spooled on the drawworks drum and the mud bailed down to below 4,400 feet but without results.

About 1,500 feet of additional line was then spliced on the long piece and bailing continued to a depth below 6,200 feet, still without results. Judging from the conditions observed in this well at the time the bit penetrated the formation from 9,910 to 9,982 feet there should have been sufficient formation pressure to have blown this body of mud out of the hole for the column of mud below 6,200 feet should have exerted a pressure of about 2,000 pounds to the square inch against the formation, whereas it is known that a mud column exerting pressures up to 4,200 pounds per square inch had been in the well when it was first drilled into the formation and had not been much in excess of actual bottom hole pressure.

Bailing Operations

This brought up the question of what was the matter with the well and it seemed that this question had been answered when the sand line was changed from three-quarters inch to five-eighths inch and 9,500 feet of this smaller size Union Wire Rope Co. line spooled and the mud bailed down to 8,275 feet where a bridge of heavy mud was encountered. This change was made when it was found that bailing to the 6,200-foot depth did not permit the well to blow itself into production.

Checking back over the drilling-in operations it is learned that mud from the bottom of the slush pit was picked up by the suction hose and pumped into the hole before the drill pipe was run. It seems quite likely that this mud consisted of settlings that had accumulated while the drilling operations were carried on and while the well was shut down the heavier portions of this mud fluid had settled out and this is the material that was first pumped into the well.

Subsequently this heavy material settled to the bottom of the well and as the lighter fluid was bailed off the top the heavy clay settled and packed. This packing of the mud could have been avoided if proper mixture of Aquagel had been added to this mud as it went into the hole.

When the long five-eighths inch sand line was in place the bailing continued down to 8,275 feet where a plug of some sort was found. Several attempts have been made to dislodge this obstruction both by applying pressures through high pressure pumps and building up a pressure within the casing of 6,420 pounds, and by adding clear water and bailing.

The Miller sand pump was used to remove the clay plug and debris from the hole and it will next be swabbed to try to put the well on production.

Cement Plug

There is also the possible explanation of the failure of this well to flow when bailed down by considering the possibility that the cement plug in the open hole below the bottom of the drill pipe has not been fully drilled out.

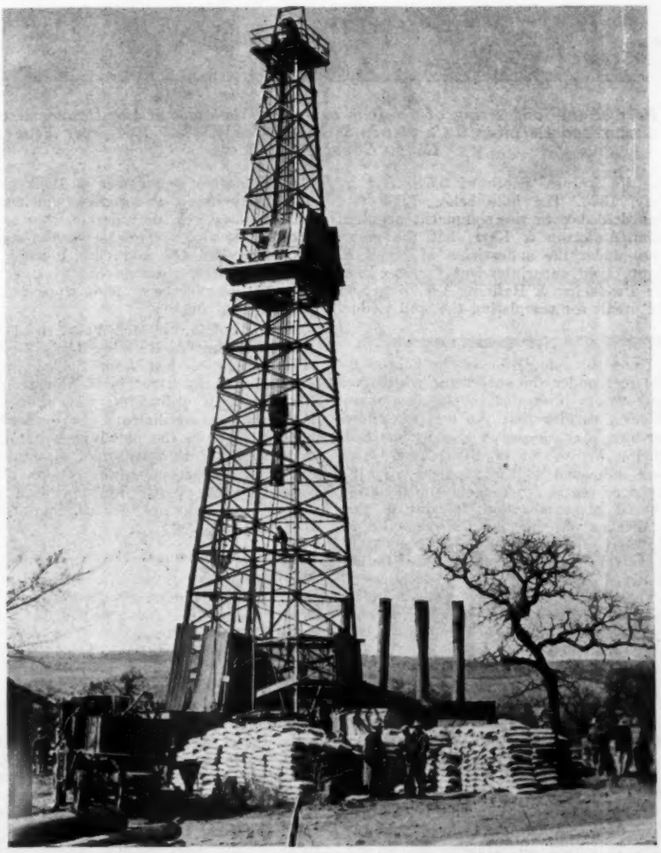
It is not customary to drill into the producing formation until after the casing is set and cemented. In this way no cement is dumped or forced into the hole opposite the producing strata and a new clean hole is drilled into the pay zone when the well is being completed.

In this instance, however, because of the fact that the operators were drilling in an unknown area the drill actually penetrated about 70 feet of the pay formations before the casing was set and the cement pumped into the hole. There is no way to prevent the cement from filling the open hole first under an operation of this kind and this hole is 8⅛ inches in diameter in this well and has only been drilled out with a bit slightly less than 6-inch diameter.

Under these conditions it is quite possible to leave a shell of cement lining the original hole that may be from 1⅛ to 2¼ inches thick. This shell with the cement forced back into the softer portions of the formation may have closed the pores in the pay sand at the face of the hole and because the heavy mud was later pumped into the hole on top of it and has never been entirely removed may be the reason why the formation pressure has not been able to again force the oil and gas into the well.

From laboratory tests it is a known fact that even a thin layer of mud or cement forced into the pores of a sand body will effectively seal it and prevent the escape of gas or oil. In this instance the hole was full of mud fluid exerting a pressure against the formation of about 4,500 pounds per square inch. When the lower batch of cement was placed the pump pressure registered about 500 pounds so it is possible to account for a pressure of about 5,000 pounds forcing mud into the formation.

The fact that only 500 pounds pump pressure was built up in placing the cement in this well indicated that the mud behind the casing was badly gas cut and probably quite fluid and low in specific gravity. The heavier cement plus the pump pressure was therefore able to force the mud up into the annular space with the 500-pound maximum pump pressure, but this did not prevent pressures of 5,000 pounds or more being ex-



Running over 10,000 feet of 6⅝-inch 26.2 pound casing in the Denver Producing and Refining Co.'s deep test in Caddo County, Oklahoma

erted upon the mud in the bottom of the hole. Some of this mud may have been forced into the pores in the sand sealing off the oil and gas in the formation while the balance of the mud that had been in the bottom of the hole was displaced by the cement.

Before proceeding with the description of the well a brief history of this land and the Indians occupying it may be of general interest. This country was all included in Indian Territory and was ceded to the Seminoles by the Creeks in 1856. Late in the summer of 1859, the Caddo, Waco and several other small tribes of Indians who had been located on the Brazos Reservation, in Texas, were brought to the Indian Territory and settled with the people of the Wichita tribe in the valley of the Washita in what is now Caddo County.

The reservation of the Wichita and affiliated bands is bounded on the east by the Ninety-eighth Meridian, on the west by the Cheyenne and Arapahoe Indian Reservation, the south by the Washita River and the Kiowa, Comanche, and Apache Indian Reservations, and on the north by the South Canadian River.

This reservation was set aside in accordance with the Treaty of July 4, 1866 (Art. 4, Vol. 19, page 794), with the Delawares, and the unratified agreement of October 19, 1872. This reservation was allotted under the Act of Congress of March 2, 1895 (28 Stat. L., 876) and 957 Indians received quarter section allotments. The total acreage allotted was 152,714, and 586,468 acres were opened to white settlement on August 25, 1901.

Since 1901 these Indians have disposed of a part of their allotted lands and at the present time they have 100,-101.04 acres held in trust for them by the U. S. Government. Indian land in the vicinity of the Denver Producing & Refining Co. test well east of Binger is quite dense. The tribes living on this reservation are the Wichita, Caddo, and Delaware, the total population of these three tribes being 1,400.

History of Lease

The correct spelling of the name of the Caddo Indian to whom this 160 acres was allotted is "A-dah-noe" and the term means in English "turkey guano." This Indian was also known as Thomas Williams, and he died on April 11, 1931, at the age of 75 years and his heirs have been determined as follows: Cho-ah, wife, one-quarter; James Williams, son, one-quarter; Robert Williams, son, one-quarter, and Joseph Williams, son, one-quarter.

The origin of the name A-dah-noe as used in describing this tract of land can probably be traced to the presence of wild turkeys in considerable numbers in the jack oak thickets that cover this portion of the hills. Streams of clear water flow through the property and it is not hard to visualize this area as an ideal place in which the turkeys congregated and roosted in these low trees.

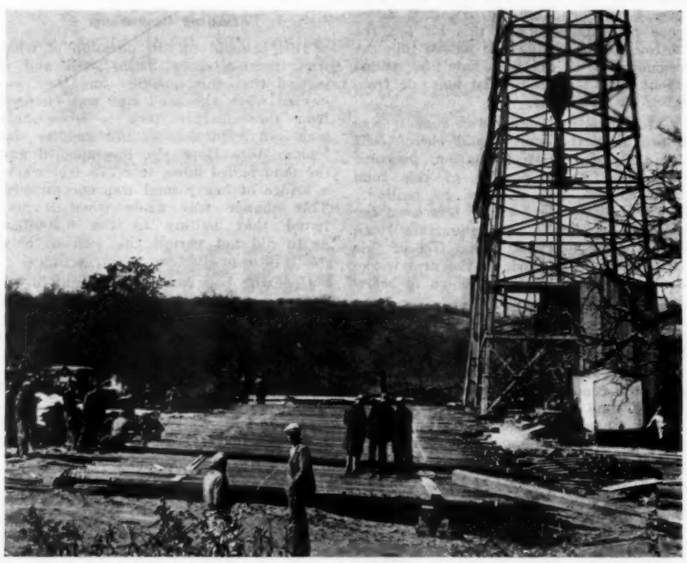
From time to time quarter sections of this Indian land has been offered for exploration for oil and gas under lease much the same as covers other Indian lands in Oklahoma. About 1930, Fred G. Shreves, then president of the Denver Producing & Refining Co., leased several thousand acres of this land lying over a structure that had been previously mapped by Clyde M. Becker, consulting geologist, Chickasha, Okla., and L. J. Fulton, now in the geological department of the Pure Oil Co.

As this geological work was done prior to 1928, Mr. Becker was able to lease about 13,000 acres of the land over the mapped structure which he later disposed of to the Pure Oil Co. after Mr. Becker's field work had been checked by the Pure Oil Co.'s geological department. This block does not cover more than one-third of the total area of the structure down to the fourth contour below the crest.

The late Fred G. Shreves, of Cushing, Okla., for several years president of the Denver Producing & Refining Co., leased several thousand acres of the remaining land over the mapped structure in 1930 and worked out a drilling deal with the Pure Oil Co. for a test well to be drilled to a depth of at least 7,500 feet. Some other companies owning land in the vicinity of this test also contributed acreage toward the expense of drilling the hole, but no company contributed any cash to the Denver Producing & Refining Co.

The well at the start was drilled by contract with Anderson & Kerr, of Oklahoma City, and good progress was made and the 9-inch string of casing set at 9,238 feet before June 9, 1933, the date upon which Mr. Shreves died in Oklahoma City. At that time the well was over 3,000 feet in the Pennsylvanian formations and Mr. Shreves was confident that if carried deep enough would encounter commercial oil.

Mr. Shreves impressed this idea upon Robert G. Rapp, who succeeded him as president of the company, and Mr. Rapp was able to raise additional funds after the 9-inch string was set to carry the well to a total depth of 9,540 feet by July, 1933. The hole below 7,500 feet was drilled with the equipment acquired from Anderson & Kerr, but the crews were under the supervision of Hugh E. Rapp, field superintendent for the Denver Producing & Refining Co., to whom the credit for completing the well is due.



Part of the long string of 6⅝-inch casing on the rack at the Denver Producing and Refining Co.'s test in C NW SW SW 34-10-10w, near Binger, Caddo County, Oklahoma

New Leasing

Upon the completion of the hole to 9,-540 feet under the agreement with other leaseowners interested in the area many of them decided that the cost of following the play deeper was not justified. During the winter of 1933 these leases were subjected to the payment of a $2 per acre rental fee to hold the land for oil and gas exploration. Because of this condition, and the lack of showing in the well, several thousands of acres of land were turned back to the Indian agency.

The faith of the Denver Producing & Refining Co. was still strong and through its president, Robert G. Rapp, an agreement was negotiated with the Indian agency officials whereby they were permitted to secure oil and gas leases upon 8,000 to 9,000 acres of this relinquished land by making an immediate down payment of 50 cents per acre and agreeing to carry the well deeper, and within the year pay a bonus of $3 per acre. They agreed to drill an offset upon the west 10 acres adjoining the lease upon which No. 1 A-dah-noe is located in the event that any encouragement was secured from the first well.

As all outside aid had been cut off from the Denver Producing & Refining Co. after the well reached 9,540 feet in July, 1933, the log up to March, 1934, was kept confidential. No samples were made available to other companies between 9,540 feet and the bottom of the hole until the showing of oil and gas was encountered at about 9,910 feet.

Since the well has been drilled to a total depth of 9,982 feet and the last 13 feet cored, the Denver Producing & Refining Co. has made available to all interested companies samples of all cuttings from 9,540 feet down to and including the core from the bottom of the hole. These samples have been studied by geologists, paleontologists and production men and there is a wide difference of opinions as to the stratigraphy.

General Geology of Section

This well is located upon a very well defined surface structure that was described in some detail by Clyde M. Becker, Murray J. Wells, and L. J. Fulton in a special article on the Anadarko Basin region published in The Oil and Gas Journal of September 8, 1932, page 12. This article included maps and many references to the literature on this area. Mr. Becker also prepared a special statement for The Oil and Gas Journal of March 8, 1934, after this showing of oil and gas was secured. This appears on page 10 of that issue.

In the opinion of Mr. Wells, the Denver Producing & Refining Co.'s No. 1 A-dah-noe well has been drilled in a section that may represent the transition series of sediments. Some of the Pennsylvanian sediments have been washed in from the old Wichita Mountains south of this area and also material eroded from mountain masses that existed to the north and northeast of the Binger structure during that time of deposition.

Mechanical Details

Both the owners of the property and the original contractors had previous experience in the deep well drilling in the Oklahoma City Field. The derrick over the hole is a Parkersburg Rig & Reel Co. 122-foot high, heavy-duty, all-steel rig, reinforced with strings of 4-inch heavy pipe re-legs. It is reported that the Martin-Decker weight indicator registered a maximum of 80 points with 10 lines in the blocks when the long string of 6⅝-inch 26.2-pound casing was run. This indicates the derrick sustained a load of approximately 359,730 pounds.

On top of the derrick is a Regan six-sheave, heavy-duty rotary crown block. The Baash-Ross traveling block is the lower complement to the crown block and both units are strung with 1⅛-inch six-nineteenths Flexible Seale Union Wire Rope Corp. drilling line. All of this equipment has served throughout the entire drilling operations and landing the casing and completing the well.

A Union Tool Co. casing hook was used with Butler casing elevators in running the strings of casing, and Wilson elevators were used for the drill pipe. Butler casing spiders were also used as the 6⅝-inch string of pipe was run.

While drilling Lucey Products Corp., B-1,700 drawworks were used in completing the hole below 7,500 feet. This type drawwork has an 8-inch drum shaft, 7½-inch line shaft, and is fitted with Timken bearings. All chain on the drawworks is 1,240 D. W. 4 Rex Chabelco Type E and from line shaft to the turntable Chain Belt Co. 1,030 D. W. 3 chain is used. The turntable is of the Ideal type built by National Supply Co. and the slips for grief stem or kelly were furnished by W.K.M. and Mission Iron Works Co.

The brakes on the drawworks were lined with Standco Woven Asbestos Brake Blocks. The power for the rig was furnished by four 125-horsepower, 250-pound pressure Donovan boilers built for Frick-Reid Supply Corp and fired by oil burners made from fittings furnished by Jarecki Manufacturing Co., with Jarecki Manufacturing Co. steam gauges and Shaffer Specialty Co. water gauges among the boiler fittings.

The boiler fire boxes are lined with Everlast Brand fire brick furnished by Acme Fire Brick Co. Boiler feed water is pumped by two Worthington 10"x 4¼"x10" pumps. The Chicago Injector was also used to handle feed water to the boilers.

An Ajax Duplex 12"x12" steam engine with roller bearings, furnished power. Johnson slush pumps, manufactured by American Well & Prospecting Co., Corsicana, Tex., were used on the well. Their size is reported as being 14"x7¾"x18" stroke. Between the pumps and the swivel United States Rubber Co. matchless rotary hose, 6,000-pound test and Bridgeport Machine Co. hose was also used.

Lucey Products Corp. furnished a Type E-6,500 swivel fitted with roller bearings throughout, also the 4¼-inch by 38-foot long square drill stem or "Kelly" used with the string of 4½-inch drill pipe.

In making up and breaking down drill pipe and casing B-J, Wilson and Dunn tongs were used.

Other accessories used around the rig were Westinghouse horizontal electric generator and Frost Electric Co. vertical generator for the light system and Worthington 10"x4½"x10" boiler feed water pumps.

In the derrick the Martin-Decker weight indicators have been used at all stages of this drilling operation and while the long strings of casing were run. They have permitted the driller to keep close track of the pressures on the drill bits at all times and the load upon the derrick while running in or coming out with drill pipe or casing.

The 4½-inch drill pipe used in this well has been fitted with Patterson-Ballagh protectors for the pipe in the 9-inch casing.

Colona thread protectors were used for both outside threads on the casing and inside threads on the couplings.

Simplex hand jacks were used for moving heavy equipment around the rig and location.

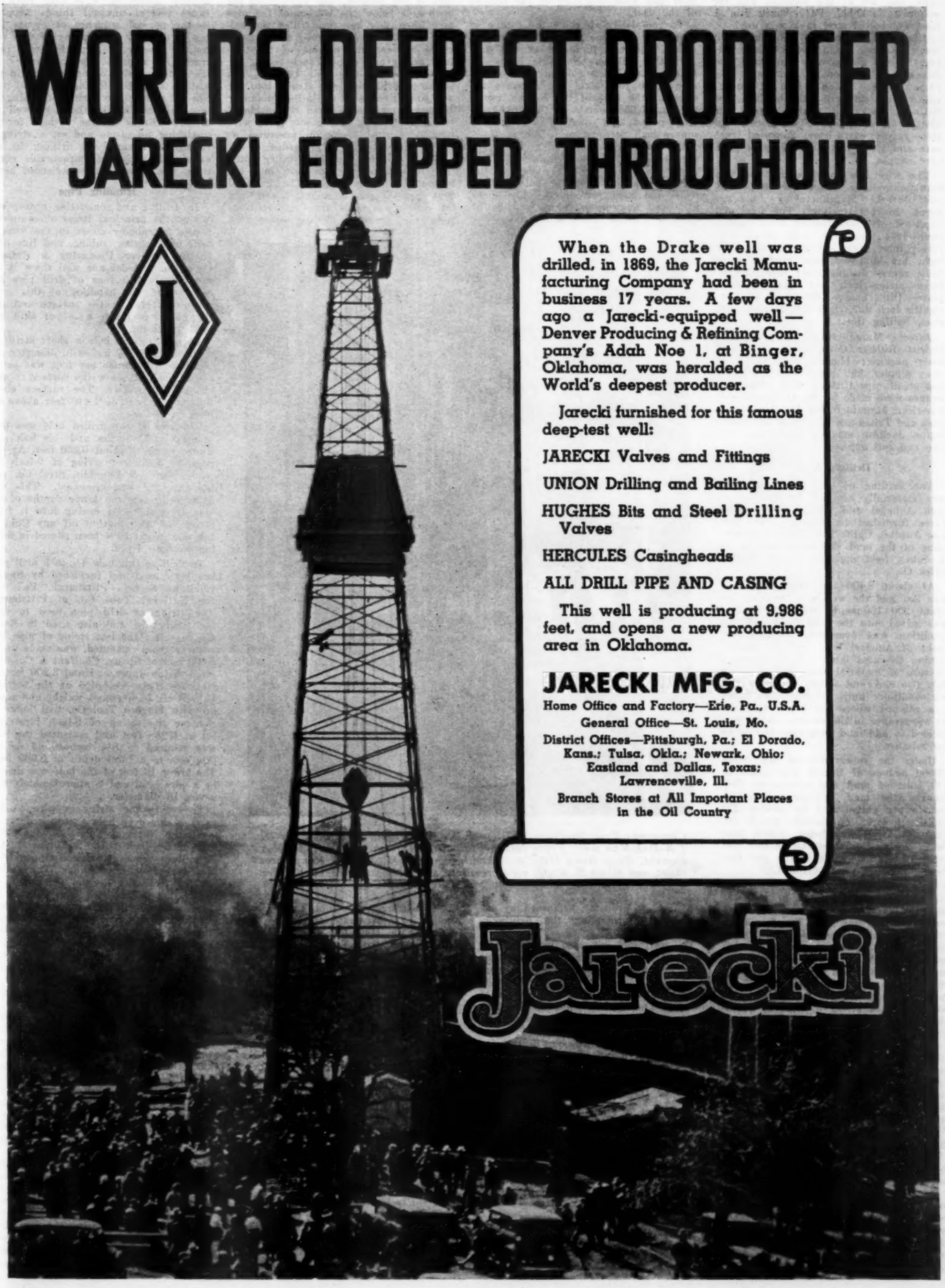
In fitting up the equipment on this rig much welding was done by the Capital Welding Works of Oklahoma City, Okla.

Snetcher & Pittman, Inc., Oklahoma City, Okla., furnished Standco woven asbestos brake blocks for the brake lining for the drawworks, also the Green Head fishtail bits used in drilling part of this hole.

When the well was drilling below 9,-910 feet before the casing was set a Baash-Ross blowout preventer was used on top of the 9-inch string of casing.

For fuel oil, a 1,000-bbl. Lincoln steel

WORLD'S DEEPEST PRODUCER
JARECKI EQUIPPED THROUGHOUT



When the Drake well was drilled, in 1869, the Jarecki Manufacturing Company had been in business 17 years. A few days ago a Jarecki-equipped well — Denver Producing & Refining Company's Adah Noe 1, at Binger, Oklahoma, was heralded as the World's deepest producer.

Jarecki furnished for this famous deep-test well:

JARECKI Valves and Fittings

UNION Drilling and Bailing Lines

HUGHES Bits and Steel Drilling Valves

HERCULES Casingheads

ALL DRILL PIPE AND CASING

This well is producing at 9,986 feet, and opens a new producing area in Oklahoma.

JARECKI MFG. CO.

Home Office and Factory—Erie, Pa., U.S.A.
General Office—St. Louis, Mo.
District Offices—Pittsburgh, Pa.; El Dorado, Kans.; Tulsa, Okla.; Newark, Ohio; Eastland and Dallas, Texas; Lawrenceville, Ill.
Branch Stores at All Important Places in the Oil Country

Jarecki

tank was set at the location and for water a 1,000-bbl. Parkersburg Rig & Reel Co. bolted steel tank was used.

Miscellaneous material on this well was furnished by Jarecki Manufacturing Co. and consisted of Jarecki 1 and 2-inch iron body nickel seat and disc globe valves; 1 and 2-inch "U-clamp" gate valves; standard malleable iron pipe fittings; heavy oil malleable pipe fittings, standard 125-pound brass gate and globe valves; extra heavy 25-pound brass gate and globe valves and Jarecki pressure gauges.

The wire line used on this job was manufactured by Union Wire Rope Co., and Jarecki Manufacturing Co. are agents in this territory. The line sold consisted of 7,500 feet of seven-eighths inch right lay, 6x19, mild plow steel, rotary line; 5,000 feet of 1⅛-inch 6x19 right lay improved plow steel Flexible Seale rotary drilling line; 6,500 feet of three-quarters inch 6x19, right lay, mild plow, drill cable; 8,000 feet of five-eighths inch 6x7, right lay, crucible cast steel, bailing line.

Jarecki Manufacturing Co. also sold Hewitt Rubber Corp. valve stem and sheet packing; Hughes cone and core bits; nipples, bull plugs, swage nipples, and small pipe fittings. Bull plugs and swages were made by W. C. Norris and American Manufacturing Co. Also small tools and Trimo and rigid pipe wrenches; Byron Jackson makeup tongs, and rag line and soft rope.

Drilling Muds

The drilling of this very deep hole was materially assisted by the use of both Aquagel and Baroid mud admixtures furnished by Baroid Sales Co., Los Angeles, Calif. The mixing and handling of the mud was supervised by D. A. Sikes, field engineer, for the Baroid Sales Co.

At about 8,400 feet mud circulation was lost and the well was "heaving" so about 250 100-pound sacks of Aquagel was mixed into the mud fluid and this condition was overcome. Another 100 sacks of Aquagel was used in reconditioning the mud later. The mud was a mixture of material from the well and Ada fire clay and served well for drilling conditions until the 9,900-foot depth was reached where gas began to make its appearance in the returns and it was decided to add mud weighting Baroid to the mixture.

Under the supervision of Mr. Sikes 25,000 pounds of Baroid was added to 400 bbls. of mud and circulated. This brought the mud mixture up to 11 pounds per gallon and by adding 350 additional sacks of Baroid, March 10, while the well was being drilled into the producing formation and another 350 sacks of Bariod while coring the formation pressure was controlled.

It is reported that the 11-pound mud entering the hole came back to the slush pit weighing between 8 and 8½ pounds per gallon showing that the formation did contain an appreciable quantity of gas. Some oil, of light brown color, also appeared on the surface of the mud pits during this drilling-in operation and this was not the same character of fuel oil that had been dumped in the hole to loosen a stuck string of pipe at about 9,965 feet, 4 feet above the point where coring started.

Some of the oil that was later bailed out of the well has been separated from mud fluid and tested about 44.8° A.P.I. gravity. This test was made at the well with field equipment and is subject to later correction by laboratory analyses but it is very evident that the bottom of this hole is in a very high grade oil producing formation.

To indicate something of the probable pressures existing in this formation penetrated, it is known that the column of gas cut mud weighs about 8½ pounds per gallon. Such a mud will exert a pressure of .442 pound per square inch for each foot of height. At 9,910 feet below the surface this pressure would equal 4,380 pounds per square inch. The formation pressure was sufficient to deliver gas with this mud to the surface of the well.

To completely shut off the escape of gas at the surface the quantity of 11-pound mud was increased at one time until the well was closed in for about 1½ hours. With a column of 11-pound mud 9,910 feet high, the pressure exerted at the base of the column would be about 5,658 pounds, as the fluid head of 11-pound mud equals .571 pound per square inch per foot of height.

It therefore seems that formation pressure will be found somewhere between 4,380 and 5,658 pounds and the reason why the well did not blow in when the mud introduced while drilling out the cement plug was bailed down to a lower pressure than the above pressures, is probably explained by the conditions surrounding the drilling-in operation.

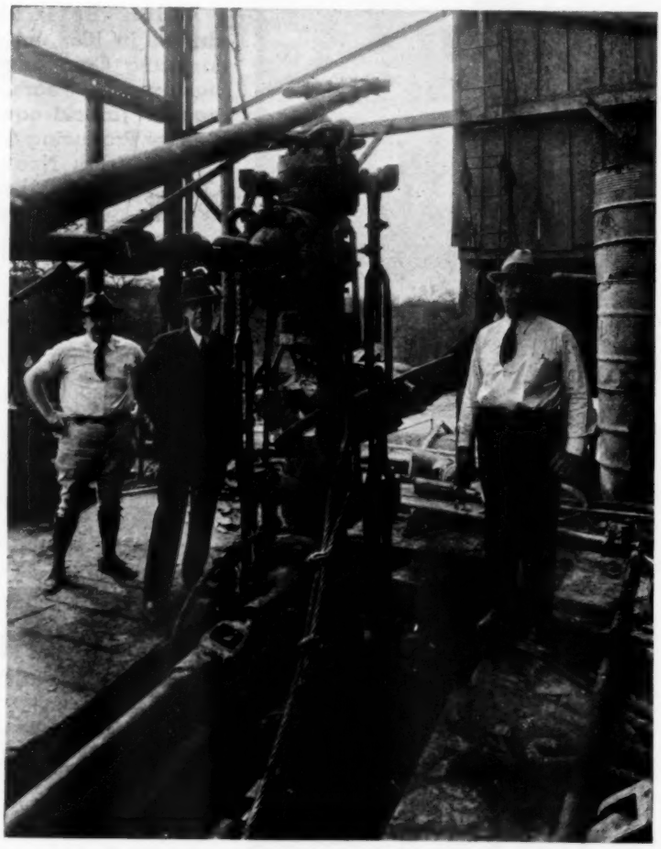
The well was cemented by the Halliburton Oil Well Cementing Co. multiple stage cementing method, explained more in detail later. With this method the cement is forced out of the bottom of the pipe and fills the hole drilled into the formation. Under ordinary conditions the casing is set and cemented before the formation is drilled, but in this instance it was found necessary to cement the pipe at 9,910 feet below the surface after producing formation had been penetrated by the drill and a portion of it cored.

This hole was drilled below 9,910 feet with 8⅛-inch diameter Hughes three-cone bit and cored with a Hughes core head that has a diameter of about 6½ inches. The total penetration of the producing formation is about 72 feet. or from 9,910 to 9,982 feet, and the lower 13 feet is 6½-inch hole, with the balance 8⅛-inch hole.

The guide shoe on the bottom of the string of 6⅝-inch casing is about 7¼-inch O.D. As the lower load of cement was forced out of this guide shoe a portion of the cement must have filled the open hole below the bottom of the pipe and when this hole was filled the balance of the cement entered the annular space between the outside of the 6⅝-inch casing and the 8⅛-inch hole.

To complete the well the 4½-inch string of drill pipe was strung into the well and fitted with a 5⅞-inch diameter Hughes three-cone bit and the inside of the long string of casing was filled with mud to control formation pressures as the drilling-in process proceeded.

To secure this mud the driller stuck the slush pump suction hose into the bottom of the mud pit. The material first pumped out of this pit and into the casing was made up of the settlings from the previous drilling operations.



Christmas Tree Hook-up at Denver Producing and Refining Co.'s No. 1 A-Dah-Noe well. From left to right the gentlemen are: R. R. MacDonald, Deep Rock Oil Co., Okmulgee, Okla., Robert G. Rapp, president, and Hugh E. Rapp, vice president and field superintendent, Denver Producing and Refining Co., Oklahoma City, Oklahoma

These settlings were not treated with Aquagel or other material to hold them in a colloidal state but pumped directly into the well and have since apparently settled to the very bottom of the hole and formed a plastic plug in the casing below 8,275 feet.

Drilling Out Plug

The bit used to drill into the 8⅛-inch cement filled hole was a little less than 6 inches in diameter so it is possible to have left a shell of cement 1/16 inches thick sealing off the formations originally penetrated with the bit in drilling the hole below 9,910 feet. It is probable that this thin shell of cement might have been disrupted by formation pressure if it were not for the fact that the hole was filled with very heavy mud, not Bariod, but a conglomeration of the slush pit settlings, that had not been treated before being returned to the well.

By the action of bailing and the intermittent feeble gas movements it is possible to have classified the lighter portions of the mud fluid put in the hole and concentrated the heavier material in the space near the bottom of the well.

These conditions do not reflect upon anyone connected with this work because several unusual things happened in the normal sequence of events having to do with the drilling of this well. As the producing formation was penetrated at a previously unknown depth the drill actually opened up virgin formation without following the usual practice of setting the string of casing before drilling in. On the next well the drillers will be on the outlook for the producing formation and set a string of casing in advance of drilling in and avoid this series of unfavorable conditions that have been experienced here.

Running Pipe

In drilling and completing a deep well one of the principal items of equipment needed is tubular goods in the form of drill pipe, casing, tubing, and line pipe. In the Denver Producing & Refining Co.'s No. 1 A-dah-noe well there is approximately 350 tons of drill pipe and casing and the handling of this great mass of metal at the surface and into the hole has taken a lot of skill and good judgment.

In starting the hole a short string of surface pipe 15½ inches in diameter and weighing 70 pounds per foot was set at about 130 feet below the surface to shut off ground waters. The surface elevation at this well is 1,446 feet above sea level.

The size of the drilled hole was then reduced to 11 inches and this hole continued down to about 6,250 feet. At this point a 6,238-foot string of 9-inch 40-pound Jones & Laughlin Steel Co. casing was run and cemented. This was done to protect the lower depths of the hole from material caving into it from above and also to shut off any fluid or gas that might have been passed in drilling to that depth.

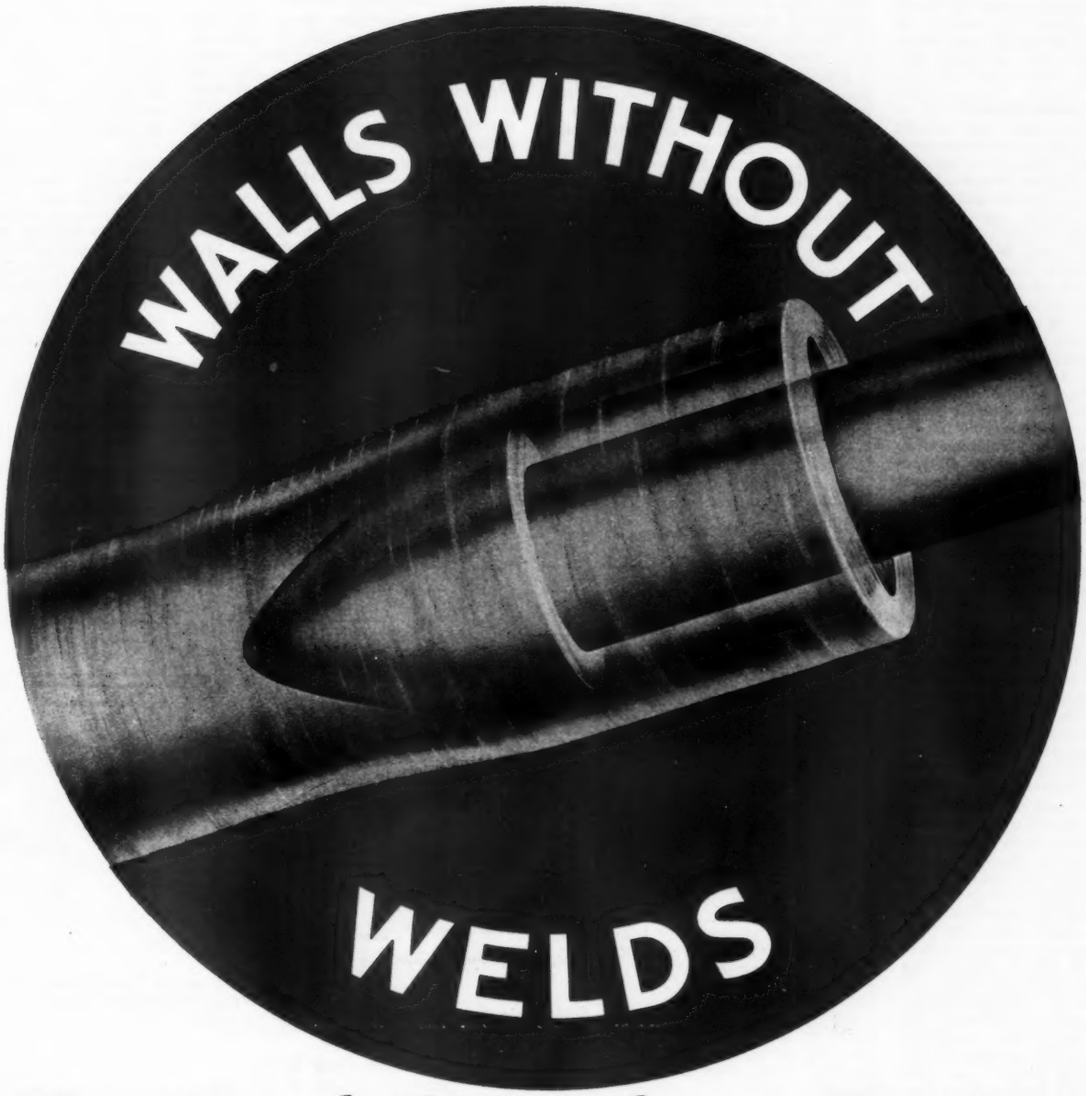
In drilling this hole 4½-inch drill pipe has been used and furnished by Spang, Chalfant & Co., Pittsburgh, Pa., and the National Tube Co. of Pittsburgh. The string of drill pipe used to drill the final hole, and also used in cleaning out after the last string of pipe had been run and cemented, was made up of 6,800 feet of Spang, Chalfant & Co. drill pipe on the upper end and 3,200 feet of National Tube Co. pipe at the bottom. It was all 16.60-pound weight and made up with Hughes Tool Co. tool joints.

After the string of 9-inch pipe was set at 6,238 feet and cemented the hole was reduced to 8⅛ inches and drilled this size to a total depth of 9,969 feet. The lower 13 feet of the hole was drilled by a core head and is approximately 6½ inches in diameter.

To secure the string of pipe needed to case this deep hole a rush order was given the National Tube Co. for 10,200 feet of 6⅝-inch O.D., 26.20-pound special alloy seamless casing equipped with long threads and couplings. The casing shipped from the Lorain, Ohio, mill of the National Tube Co. was threaded 10 threads per inch on a taper of three-eighths inch per foot with a total thread length of 3.8 inches, or 38 threads. The special length couplings are 9 inches long by 7.390 inches O.D. The clearance between the outside of the coupling and the inside of the 8⅛-inch drilled hole is .367 inch, if the pipe is placed exactly in the center of the drilled hole.

This is the longest string of casing ever run and the work of getting it into the hole started on Saturday morning, March 10, and at 7 p.m., the same day 7,300 feet of casing was in the hole when a tight place or shelf was encountered which forced the work to be held up until the midnight crew came on duty. At one time it seemed that it was going to be necessary to remove all the pipe in the hole and rerun it after the obstruction was removed.

It was later decided to make a further attempt to lower the pipe and preparatory to this trial the casing was set in the slips, the elevator and traveling block lowered enough to permit the helper on the forbile board to turn the traveling block to the left and in that way wind up the 10 casing lines between crown and traveling block. This winding done,



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the casing was again freed from the slips, and tongs on the casing prevented it from turning to the right on raising the string of pipe. As the string of pipe was slowly lowered the casing lines were permitted to unwind and the rate of unwinding was controlled by the tongs on the upper part of the casing. This rotary movement to the right caused the round end guide shoe on the lower end of the pipe to slip off of the shelf upon which it had lodged and into the lower portion of the hole.

Running Casing Resumed

This tight place passed, the running of the balance of the casing was started at 8 a.m., Sunday, March 11, and at 12 noon that day, the 9,910 feet of pipe was landed. It required 328 lengths, averaging 30 feet 6 inches each, to case this well. The total length of this pipe is over 10,000 feet and it weighs 132 tons. The difference in overall length of pipe and the length of the pipe in the hole is accounted for by the makeup of 4 inches at each joint this being the amount of thread run into the couplings and when all strung together the pipe measured from top to bottom 9,910 feet. This pipe was run in a total elapsed time of 30 hours, including 5 hours working casing, 6 hours unavoidable delay and 19 hours actual running time.

Prior to running this casing all couplings and field end threads were cleaned with steam, and inspected to eliminate any possible chance of threads being damaged in transit as such damaged threads would make a weak joint. High grade zinc dust lubricant made by Gulf Refining Co. was used to protect the threads and help insure proper joint make-up. After stabbing, joints were made up using a rope spinning line with several wraps taken around the pipe and the cathead on the drawworks furnishing the power at a regulated speed to reduce the possibility of galling. Joints were given final make-up by use of heavy tongs and cathead power. Easy stabbing of all joints was a noticeable feature while running the casing.

In running this long string of pipe into the hole the Halliburton Oil Well Cementing Co. guide shoe and floats were used. The guide shoe is what the name implies, a steel shoe placed on the lower end of the pipe to serve as a guide while the pipe is being lowered into the hole through the mud fluid that fills the hole during such an operation.

The mud fluid is left in the hole as the casing is run for two reasons. It continues to serve its original purpose of controlling formation pressures and wall cavings and in addition it serves to sustain a part of the weight of the string of pipe being lowered. As this pipe enters this mud fluid with a specific gravity of about 1.32 a displacement of the mud equal to the cross sectional area of the pipe creates a condition of buoyancy in the pipe, that is, the property of floating or partially floating in the heavy mud fluid.

In other words, the pipe and mud fluid cannot occupy the same portion of the drilled hole at the same time and in forcing this heavy mud up the hole and out at the surface the downward movement of the string of pipe is retarded.

To keep the mud from flowing up into the inside of the casing during this operation float collars were used. These collars consisting of a valve seat, ball and spring, and two were placed at 9,877 and 9,846 feet below the surface. A spring holds a ball against a seat as the pipe drops into the hole and this closes the end of the pipe and keeps the mud fluid and water out of the inside of it. The two collars are used for safety.

A third float collar was set in the string of casing at 7,939 feet, or one joint below the place where the Halliburton Oil Well Cementing Co. multiple stage cementing device was set.

While all these precautions were taken in running this pipe it was decided by the owners of the well to fill the inside of the casing with mud fluid after running each group of 25 joints of casing. This was done as a precaution against collapsing the casing due to the greater pressure exerted on the outside of the pipe if the inside is empty. By filling the inside with mud from the top the fluid pressures were equalized. However, at 8,500 feet below the surface this practice was discontinued as it was then decided that there was greater chance of freezing the string of casing in the hole by following this practice than there was of collapsing it.

After this long string of pipe was in place in the hole Halliburton Oil Well Cementing Co. placed 3,000 sacks of cement behind it using the multiple stage cementing method which is described in greater detail elsewhere.

On March 21 after a period of 11 days setting of this cement, the cementing company built up a pressure of 6,420 pounds within this string of casing by the use of its high pressure pumps during an attempt to force a bridge out of the lower end of the pipe and permit the oil and gas to flow from the formation. This indicates that this long string has a high safety factor for the casing specification for this class of goods calls for a mill test pressure of 3,800 pounds per square inch while the theoretical bursting pressure based on Barrow's formula is estimated at 11,042 pounds per square inch.

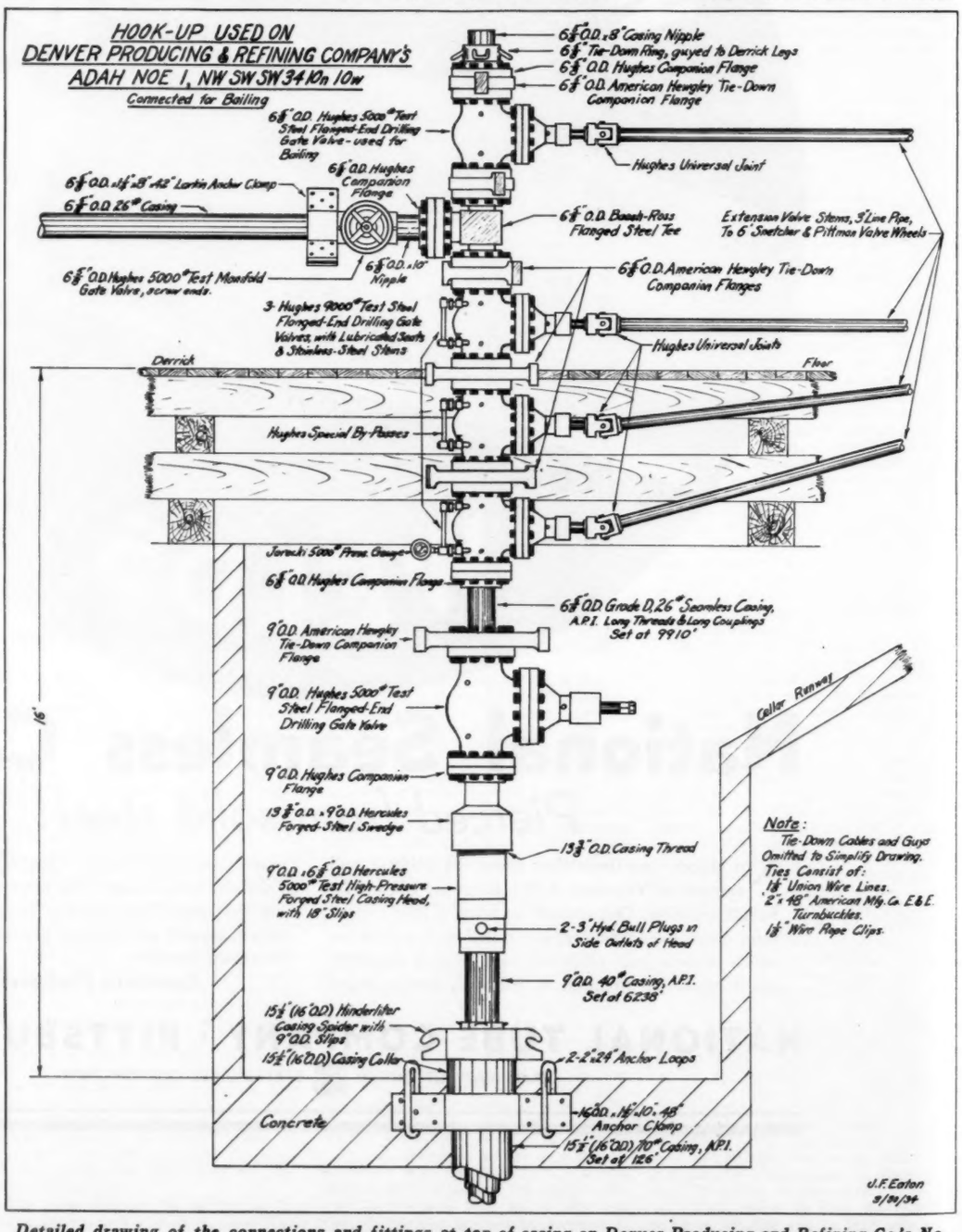
Well Head Hook-up

When high-pressure formations are penetrated with the drill the operator always likes to know in advance, if possible, the pressures to be encountered and make preparations to control these pressures by fittings placed at the top of the various strings of casings. When completing a wildcat well such as Denver Producing & Refining Co.'s No. 1 A-dah-noe in Section 34-10-10w, near Binger, Caddo County, Oklahoma, it is not always possible to anticipate the depth at which the producing formation will be found and that is just what happened in this particular well.

The string of 9-inch, 40-pound pipe was set at 6,238 feet below the surface and the 8½-inch open hole drilled below that point and the top of the pay found at about 9,910 feet. Even the act of drilling ahole 1⅞ miles beneath the surface is a rare accomplishment, to say nothing of drilling such a hole into a high-pressure formation.

The proper use of Baroid and Aquagel with special clays permitted the drillers to actually penetrate to a total depth of 9,982 feet. When this depth was reached it was decided to run a string of 6⅝-inch casing and after this was done and cemented the next problem was to rig up at the surface of the well to permit the well to be brought into production by one of several methods.

The accompanying drawing of the hook-up used at this well has been prepared by John F. Eaton, engineer, Jarecki Manufacturing Co., and the data used are taken from notes made at the well and checked later as the work of making the drawing progressed. It is an accurate drawing of the hook-up at the time the work of bailing at 8,275 feet was in progress and it can be added to at the top to provide means of conduct-


HOOK-UP USED ON
DENVER PRODUCING & REFINING COMPANY'S
ADAH NOE 1, NW SW SW 34 10n 10w
Connected for Bailing
6⅝" O.D. x 8" Casing Nipple
6⅝" Tie-Down Ring, guyed to Derrick Legs
6⅝" O.D. Hughes Companion Flange
6⅝" O.D. American Hewgley Tie-Down Companion Flange
6⅝" O.D. Hughes 5000# Test Steel Flanged-End Drilling Gate Valve - used for Bailing
Hughes Universal Joint
6⅝" O.D. Hughes Companion Flange
6⅝" O.D. x 14" x 8" x 42" Larkin Anchor Clamp
6⅝" O.D. 26# Casing
6⅝" O.D. Baash-Ross Flanged Steel Tee
Extension Valve Stems, 3" Line Pipe, To 6" Spetcher & Pittman Valve Wheels
6⅝" O.D. Hughes 5000# Test Manifold Gate Valve, screw ends.
6⅝" O.D. x 10" Nipple
6⅝" O.D. American Hewgley Tie-Down Companion Flanges
3 Hughes 9000# Test Steel Flanged-End Drilling Gate Valves, with Lubricated Seats & Stainless-Steel Stems
Hughes Universal Joints
Derrick
Floor
Hughes Special By-Passes
Jarecki 5000# Press. Gauge
6⅝" O.D. Hughes Companion Flange
6⅝" O.D. Grade D, 26# Seamless Casing, A.P.I. Long Threads & Long Couplings Set at 9910'
9" O.D. American Hewgley Tie-Down Companion Flange
9" O.D. Hughes 5000# Test Steel Flanged-End Drilling Gate Valve
Cellar Runway
9" O.D. Hughes Companion Flange
13⅜" O.D. x 9" O.D. Hercules Forged-Steel Swedge
13⅜" O.D. Casing Thread
9" O.D. x 6⅝" O.D. Hercules 5000# Test High-Pressure Forged Steel Casing Head, with 13" Slips
2-3" Hyd. Bull Plugs in Side Outlets of Head
9" O.D. 40# Casing, A.P.I. Set at 6238'
13⅜" (16" O.D.) Hinderliter Casing Spider with 9" O.D. Slips
13⅜" (16" O.D.) Casing Collar
2-2"x24" Anchor Loops
16'
Concrete
14" O.D. x 14" x 10" x 48" Anchor Clamp
13⅜" (16" O.D.) 70# Casing, A.P.I. Set at 126'
Note:
Tie-Down Cables and Guys Omitted to Simplify Drawing.
Ties Consist of:
1⅛" Union Wire Lines.
2"x48" American Mfg. Co. E & E. Turnbuckles.
1⅛" Wire Rope Clips.
J.F. Eaton
3/20/34

Detailed drawing of the connections and fittings at top of casing on Denver Producing and Refining Co.'s No. 1 A-Dah-Noe well, near Binger, Okla. This drawing was furnished by Jarecki Manufacturing Co., Tulsa, engineering department

ing the oil and gas to the American Tank Co.'s large oil and gas separator that is installed at the well.

To the experienced oil man the drawing tells the whole story and the picture of the upper portion of this christmas tree will aid others to get some clear idea of what it all looks like. In the drawing the tie-down cables and guys are not shown because if the lines needed to represent them were added to the drawing it would make confusion and a drawing hard to understand. In a note at the side of the drawing a list of the material used is given and the picture shows how these tie-downs and guys were actually applied.

The fittings on this well are of the very heavy pressure type and the material used was sold by Jarecki Manufacturing Co., Tulsa. The design of the christmas tree is credited to Hugh E. Rapp, field superintendent for the Denver Producing & Refining Co., and follows closely the standard hook-up used by that company on their high-pressure Oklahoma City Field wells.

The surface string of casing and the anchor clamp is set in the concrete base of the 16-foot deep cellar. Anchor hooks extend upward from this clamp and the top of the 9-inch string is enclosed in a Hinderliter Tool Co. 15½-inch casing spider with 9-inch O.D. slips. This makes definite connection between the surface string and the 9-inch string of casing.

To handle the long string of 6⅝-inch casing safely the Hercules Tool Co.'s 5,000-pound high-pressure forged steel casinghead is screwed onto the 9-inch casing and the upper end of the 6⅝-inch casing is suspended inside this casinghead by special slips 18 inches long.

The first Hughes Tool Co. 5,000-pound test valve is attached to the upper end of a 13⅜"x9" Hercules forged steel swedge and the 6⅝-inch casing also passes through this valve.

Normally this valve is inoperative with this 6⅝-inch casing passing through the body, but as a precautionary measure against failure of the 6⅝inch string at any point below the top of the hole this extra valve is well worth all it costs. It is used only in an emergency and is therefore not provided with extension to the valve stem as are all other valves on this well.

Heavy Master Gates

The three main valves on this hook-up are 9,000-pound test steel flanged end Hughes Tool Co. make equipment with Hughes special by-passes to permit of equalizing pressures above and below the valve seats in the event this is necessary. If high pressure is built up against the lower part of the valve gate and there is low pressure above this gate it is difficult to move the gate until the pressures above and below are equalized. These Hughes Special by-passes are for that purpose.

They are made up of high-pressure fittings and needle valves and by manipulation the pressure from the under side of the valve can be passed to the upper side and as the other valves above are closed this will build up and equalize the pressure on the top side of any valve in this hook-up.

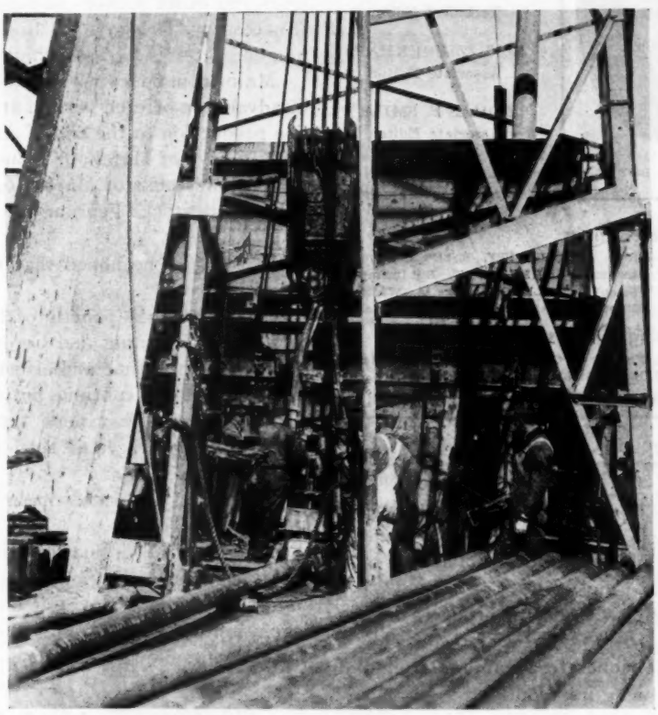
To conduct the mud fluid from the 6⅝-inch casing to the slush pit when the formation pressure forces this material out of the hole a Baash-Ross flanged steel tee is placed above the upper high-pressure valve. This will divert the fluid to the joint of 6⅝-inch casing set horizontal and pointed in the direction of the slush pit.

This whole hook-up is actually drawn with this slush pit connection pointed to the west and the extension valve stems leading out to the east. The south side of all fittings are shown.

The valve above the steel tee controls the direction of the flow of the fluid coming out of the well and after the mud has blown into the slush pit and clear oil and gas make their appearance in this stream the 6⅝-inch Hughes manifold gate valve on this pipe is closed and the master gate above the tee opened. The oil and gas will then be diverted straight up into the derrick or, as the hook-up is now completed, into a Mid-Co steel tee which also serves as a flow bean into which the 6⅝-inch pipe leading to the oil and gas separator is screwed.

This is common hook-up for the Oklahoma City wells and when this well is opened for production the oil and gas will first enter a high-pressure American Tank Co. oil and gas separator and then the oil will pass to the battery of lease storage tanks.

It is possible to also erect above the top valve on this hook-up or above the Mid-Co flow bean and tee, a joint of pipe to serve as a lubricator for running bailer or tools into and out of the casing. The drill pipe can also be run through this hook-up, although the drillers have to work upon a platform erected on the derrick floor to make up or break down joints.



Running the world's longest string of 6⅝-inch 26.20 pound casing in Denver Producing and Refining Co.'s No. 1 A-Dah-Noe well in Caddo County, Oklahoma

Multiple Stage Cementing

When extremely long strings of pipe have been run into a hole and it is necessary to run cement behind the casing there have been some mechanical problems developed, as well as some involving the chemistry of cementing, that have caused the Halliburton Oil Well Cementing Co. to develop a new method of handling this kind of work and it is known as multiple stage cementing because the cement is introduced behind the casing at two points in successive stages, but all within the scope of one operation.

The high temperature of the formation at great depths, the time required to actually place the cement at the place desired, the action of the water under high pressures and several other details have caused the cementing companies much concern as the drilled holes passed 8,000 feet.

After a very exhaustive study of all phases of this problem the engineers for Halliburton Oil Well Cementing Co. decided that the best means of overcoming this difficulty was to force a portion of the cement out of the lower end of the pipe, and the balance through a special long collar, provided with a tight fitting sleeve on the inside, and four holes drilled through both collar and sleeve to permit the escape of the upper batch of cement at the predetermined time.

To give a full and complete description of this method here is unnecessary for it has been described in special articles in The Oil and Gas Journal. The main points to be remembered are that 1,300 sacks of cement were mixed in 60 minutes to form the lower batch and it was introduced into the hole between two loose fitting plugs. Above the upper plug a measured quantity of mud fluid was introduced to space the third plug far enough above the second plug to permit all of the 1,300 sacks of cement to be forced out of the opening in the guide shoe at the end of the casing, and up into the annular space between casing and drilled hole.

As the third plug completely fills the inside of the pipe, above it 1,700 sacks of mixed cement were pumped into the casing, and then the upper or fourth plug inserted. The second batch of cement is forced downward by the addition of mud fluid under pump pressure. In this way the lower batch of cement and mud fluid with plugs as well as the upper load of cement and its accompanying plugs are all moved simultaneously down the inside of the casing.

The cement from the lower batch is forced out of the lower end of the pipe and as it travels upward in the annular space between casing and bored hole it forces the mud fluid that was in that space upward and this mud will pass above the special collar inserted in this well at 7,908 feet and toward the upper end of the hole as the second batch of cement is released from the casing into the space behind it.

The third plug, or the lower plug of the upper load of cement, is so shaped and of such size that it engages the lugs on the inside of the multiple stage device and moves this sleeve downward until it is stopped by the upper end of the next lower joint of casing. When this sleeve has moved downward this distance it has brought two sets of holes, four in the sleeve and four in the collar in a position to permit the escape of the cement into the annular space outside the casing. This movement causes the mud fluid that has been forced upward behind the pipe, from the bottom of the hole to the 7,900-foot level, to be carried on upward toward the surface as the second batch of cement takes its place.

In this way the two batches of cement will fill the annular space behind the entire string of casing that is in open hole and even up into the 9-inch string a short distance.

The 3,000 sacks of cement were mixed and placed in a total elapsed time of two hours, 60 minutes for the first batch of 1,300 sacks and a second 60 minutes for placing the second batch of 1,700 sacks. It is reported that as the last of the mud fluid was forced out of the hole by the cement and run into the slush pit it showed relatively large quantities of fresh oil and was full of natural gas. This batch of mud came from somewhere near the bottom of the hole and should therefore be representative of conditions in the formation before cementing.

Drilling Operations

The drilling was actually started on January 5, 1933, with a 20-inch hole carried to a depth of 130 feet, where a surface string of 15½-inch 70-pound pipe was set and cemented. The hole was then reduced to 11 inches and drilled to a total depth of 6,250 feet. A 6,238-foot string of 9-inch O.D. 40-pound Jones & Laughlin Steel Co. casing was set at this point and cemented by Halliburton Oil Well Cementing Co. with 2,200 sacks of cement.

After this string of casing was in place the hole was reduced to 8⅛-inch and drilled with Hughes Tool Co. three-cone rock bits to a total depth of 9,969 feet. The hole was cored for the last 13 feet with Hughes core head and 7 feet of core recovered, and samples of the missed section caught at the discharge to the slush pit.

The well reached a depth of 7,500 feet April 5, 1933, when it was taken over by Hugh E. Rapp, field superintendent, for the Denver Producing & Refining Co., who has had charge ever since. The hole reached a depth of 9,540 feet and all interested companies withdrew from further participation in this test in the early part of July, 1933, and the operations were shut down until December 29, 1933, when they were again started up with the Denver Producing & Refining Co. paying all costs.

About January 6, 1934, drill pipe was stuck in the hole and not freed until a month later and the top of the producing formation was reported as having been reached at 9,910 feet about March 8.

The lower part of this hole was drilled with 4½-inch drill pipe and the string was made up with about 6,800 feet of Spang-Chalfant pipe on top and 3,200 feet of National Tube Co. drill pipe at the lower end. Hughes Tool Co. tool joints were used throughout.

On one or two occasions it was necessary to take heavy pulls on this long string of drill pipe and Mr. Rapp estimated that this pull was equal to the tension that would be set up in a string of this size pipe 15,000 feet long. From this it is believed that the hole can be drilled much deeper with safety if necessary.

SHELL INCREASES OUTLETS

ST. LOUIS, Mo., Apr. 2.—Shell Petroleum Corp. has acquired all the real estate, facilities and business of the O'Neil Oil Co., of Milwaukee, Wis., one of the largest gasoline and motor oil distributing organizations in that State, it was announced today by Alexander Fraser, president.

The deal was for cash and the amount understood to have been approximately $1,000,000. The major part of the properties involved are located in Milwaukee County. Several other properties in cities and towns within a radius of 40 miles of Milwaukee are included in the transfer. Approximately 250 storage units and resale outlets of all kinds are affected.

Consummation of the deal makes Shell Petroleum Corp. one of the leading petroleum marketers in Wisconsin. J. W. Watson, vice president and treasurer, St. Louis, and J. G. Sinclair, northern division manager, Chicago, negotiated the deal for Shell Petroleum Corp.

THE OIL AND GAS JOURNAL

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A State of Chaos

Administrator Ickes speaks of the oil industry on the Pacific Coast being in a state of chaos. Why limit it to the Pacific Coast?

Looking over the five or six-ring circus now in progress makes the average oil man dizzy.

So far there has been one tangible, concrete advantage from the code, the advance in crude prices following its adoption.

That advance was based on hopes of stabilization which are yet to be realized.

Curtailment of production is still waiting for enforcement in East Texas. It is true the State laws have been strengthened but we have yet to see whether they will be made effective. The supplementary Federal power is being submitted to the United States Supreme Court on appeal.

Detouring that decision the amendment to the Federal revenue bill imposing a fractional tax on oil at the wells and refineries is designed to provide Federal authority to get at the facts of overproduction.

But the real "merry-go-round" has been the maneuverings on the refining and marketing provisions of the code.

Although the price of crude rose on the psychological effect of the adoption of the code the refined markets have failed to respond because of competitive conditions that ignored the code.

These conditions have been under consideration by the Planning and Co-ordination Committee and the Petroleum Administrative Board for more than six months without effect. Refining and marketing conditions are just about as they were when the code was signed.

Refinery allocations by districts have been promulgated and allocators supposed to allot them but gasoline stocks continue to menace the opening of the main consuming season despite all warnings.

The threat of governmental price fixing failed because it was felt to be only a threat. The marketing and pooling agreements were then suggested, with a separate cartel for California that some thought was even better than the marketing agreement and might be adopted generally. But the Department of Justice thought it too good to be law and the courts will have to pass on it also.

Meanwhile the marketing agreement missionaries have been working on East Texas, the score being reported 13 signers out of 30 and the market a fraction stronger, possibly, it is suggested, because the price cutters felt they could get more than they had been getting. If they ever showed that much sense it might be encouraging.

With all these balls in the air Washington reported a couple more going up. The Planning and Co-ordination Committee recommended that the code be amended to authorize the Federal agency to establish quotas in commerce for crude from all or any states, pools, properties and storage sources, banning commerce in excess crude or products derived from excess crude.

Also authorizing the Planning and Co-ordination Committee to establish quotas in commerce for motor fuel from any or all refineries and other sources of supply, by operators or groups of plants, if necessary. These quotas to be enforced by requirement for serially numbered certificates on shipments from quotas.

Major companies who feared the quota plan could be used to their disadvantage offered instead an agreement either to limit daily gasoline production to the end of April to the daily production during the first 16 days of March, or reduce gasoline stocks on April 30 to 7 per cent below stocks of March 16. Provided that no company has to do either if its stocks February 28 did not exceed its stocks on that date in 1933.

It can only be hoped that this controversy is not another blind alley.

Considering the paucity of results from all their labors the members of the Planning and Co-ordination Committee who have given so much of their time and effort to a thankless job might feel it hardly worth while to continue but the alternative is not to be thought of.

If the industry cannot settle these questions of refining and marketing what sort of settlement can be expected from a board outside the industry?

The major companies make a constructive suggestion that since no basic data exists on which gasoline stocks can be regulated the Planning and Co-ordination Committee and the Petroleum Administrative Board name four experts to meet with four named by the majors to ascertain the basic data and recommend a suitable plan for regulation by April 20. This should at least offer a basis for discussion and possible agreement.

Have the Voters Tell Them

The near-bankruptcy of cities through the slump in tax revenue due to the deflation of values and the impoverishment of the taxpayer is matched by the increasing search for new tax sources by State and Federal law makers.

Instead of a large annual or semi-annual impost the new idea in tax collection is little and often. Get it from the taxpayer every day if possible, a few cents at a time and the aggregate will more than make up for decline elsewhere.

Hence the sales tax and the multitude of nuisance taxes, inspired no doubt by the success of the tax on gasoline which extracts more than half a billion dollars a year from the taxpayer's pocket without a whimper.

The average motorist grumbles over paying for a license for his car and puts it off as long as possible but he pays two or three times as much in gasoline taxes throughout the year and thinks nothing of it.

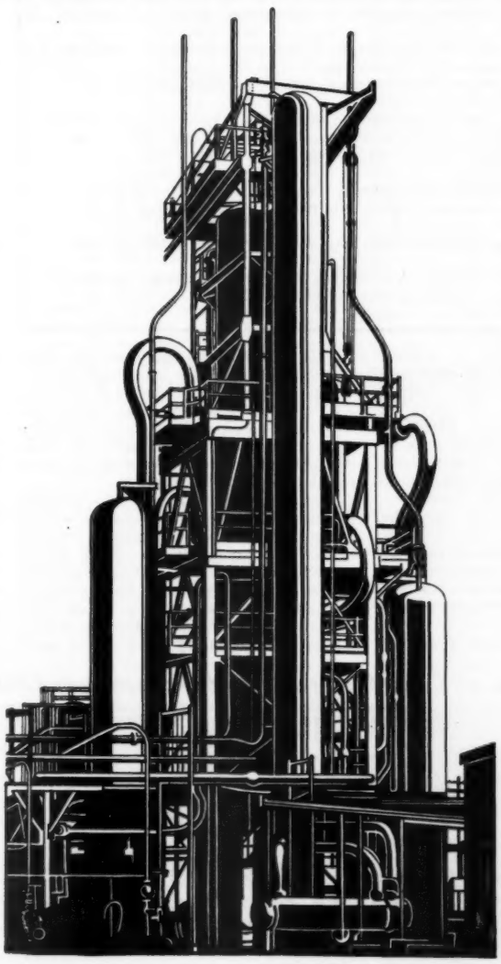
Of the 14 billions of all kinds of taxes paid in this country last year the motor vehicle owner paid $1,180,000,000. He paid almost 38 per cent of all the State taxes collected. Every time he paid a dollar for gasoline 43 cents went for taxes.

The oil industry is concerned because high taxes on gasoline give the tax evader a chance to cut prices and because they reduce the ability of the consumer to buy gasoline. But its protests are waved aside as selfish.

The real victim is the consumer who pays the tax. If every oil company would use a part of its advertising in the daily papers to tell the motorist what the tax is costing him the law makers would soon hear from the voters.

BETTER METHODS OF PROCESSING

result from coordinated research and experience



Methods of processing have improved rapidly during the past few years but every improvement advanced by The M. W. Kellogg Company before being incorporated in plant design must stand the test of thorough research and examination by practical operators.

It is because of continual research and broad experience that Kellogg units are so successful in producing high grade products to meet difficult marketing conditions.

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Group 3 Market Firmer on Strength of Reported Improvement in the East Texas Situation

By T. F. SMILEY

The Oklahoma (Group 3) gasoline market, which had been floundering weakly, took a little courage this week and acquired a firmer undertone, with minor price improvement, under the stimulus of news that the situation in East Texas, canker spot of the oil industry, was beginning to look better as the result of some buying of consequence and signs of a more vigorous attack on the army of hot oil producers and refiners in that district.

The feeble market reported last week continued to sink until Saturday, when the decline was halted by reports of purchases in East Texas for coastwise or export shipment. An order for 1,000,000 gallons a few days earlier had failed to attract more than momentary attention, but further purchase of 2,000,000 gallons created a hopeful feeling throughout a discouraged trade.

Still More Booked for Movement

On top of this buying came reports Monday of this week that 3,000,000 gallons of 400-endpoint gasoline had been booked for movement to the Gulf from East Texas by a leading East Texas refiner. In this connection it was reported that this refiner had tried to interest other refiners in a pool buying project, largely with a view of relieving the situation in that area, but that he had met with little success. How much of the 3,000,000 gallons booked for Gulf shipment was purchased from other refiners and how much of it was taken by this refiner from his own stock is a matter of conjecture.

In any event, as a result of relief in East Texas during the past 10 days, East Texas refiners late Monday advanced the price of low-octane U. S. Motor to a low of 3¼ cents Oklahoma and that of the low-octane 400-endpoint to a low of 3½ cents Oklahoma.

Refined Oil Market Barometer

An improved gasoline market was reported in most areas, with hope that further strength would develop in the immediate future. It is apparent, however, that conditions are far from satisfactory. The natural gasoline market was demoralized, with manufacturers declaring it imperative that some device be adopted to carry the industry over its recurring slack seasons, when, as at the present time, the material is sold at less than cost of manufacture. In the Mid-Continent territory the unexpected activity of neutrals was a feature.

Mid-Continent—Gasoline has firmer undertone, with prices stronger. Naturals extremely weak. Neutrals strong.

East Coast—Gasoline shaky. Residual fuels firm. Wax inquiries fewer, but prices hold.

Gulf Coast—Decided strengthening of gasolines attributed to better conditions in East Texas. Kerosene scarce, prices firm. Fuels show further strengthening. Lubricants fairly well sold up, with market firm and prices steady.

Pennsylvania—Higher octane gasolines lower. Straightrun situation apparently improved. Lubricants quiet. Refinery stocks expected to show belated increases.

California—Gasoline market weak, but warm weather stimulating sales. Price war still on.

Chicago—Gasoline firmer, but buying slow and cautious. Kerosene strong and in demand. Industrial fuel in good demand.

A rumor that provided a further steadying influence was to the effect that a well-known broker had tried to obtain options on 400-endpoint material in North Texas and Oklahoma. However, as far as could be ascertained, none of this gasoline actually was bought, and the movement of spot gasoline to domestic buyers continued to be slow. Furthermore, whether jobbers will look upon the recent buying for export and coastwise movement as significant enough to cause them to enter the market with a volume of orders sufficient to support a further price advance still remains an uncertainty.

Natural gasoline continued its search for buyers with no more success than last week. Prices were unchanged, though some distress 26-70 material is said to have been bought for 1¼ cents, and some 18-55 was understood to be available at 1¾ cents, these prices in each case representing a recession of one-eighth cent from a week ago.

There was a feeling in the natural gasoline trade, however, that a better market might develop swiftly with a little shift in conditions. East Texas gasoline is so volatile that jobbers who buy it do not buy much natural gasoline, and the heavy stocks of gasoline available in East Texas thus have exerted a depressing influence on the natural gasoline market. With a cleaning up of the East Texas situation there is expected to be an increase in the buying of gasoline in Oklahoma, Kansas and North Texas, with corresponding increase in the demand for the naturals.

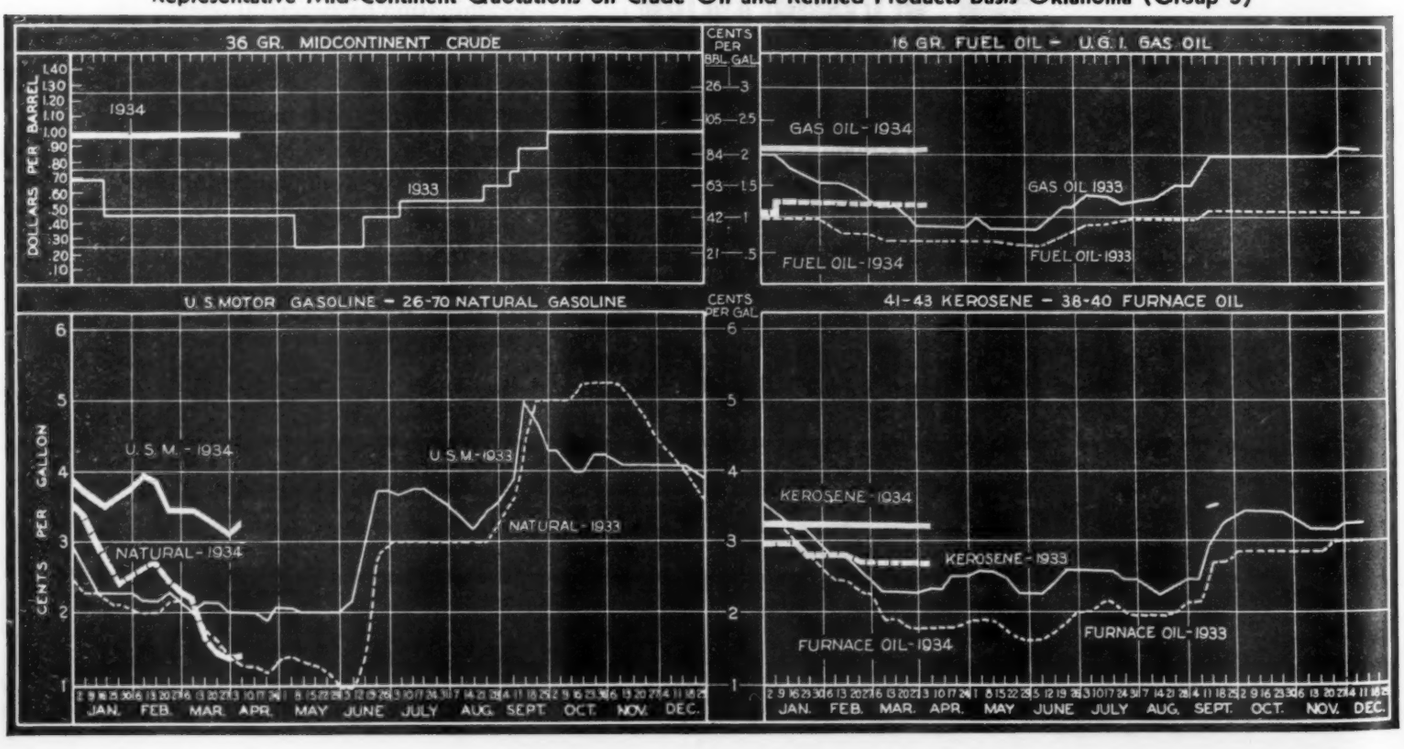
Neutrals in the Limelight

One of the surprises of the last week was the manner in which the neutrals, which long have played a meek and retiring role among petroleum products, leaped into the limelight. Many companies found themselves hard pressed to fill the unexpected flood of orders.

Analysts of the market pointed out that a rather listless demand for neutrals during the last several years had led refiners to produce less of this material. In the meantime new types of automobiles were requiring lighter grades of motor oil and less bright stock. Gradually too the general revival of industry was creating a wider demand for the light lubricants. Thus it came about that diminished production and low stocks confronted sharply heightened demand, with the result that the neutrals found themselves occupying a conspicuous place in the market. Although prices were not changed, it was said that higher quotations in the near future were probable.

The bright stocks and cylinder stocks were steady. Wax continued to ease off, but prices held. There was sufficient demand for kerosene to maintain the prices which have prevailed for several weeks. Much of this came from agricultural areas. A substantial quantity of kerosene goes in the spring and fall seasons to rural homes provided with stoves using kerosene as fuel. These stoves are lighted when it is desired merely to "take the chill off." Furnace oils were just strong enough to hold their current prices.

Representative Mid-Continent Quotations on Crude Oil and Refined Products Basis Oklahoma (Group 3)



Conditions Disturbing Eastern Market Show Few Signs of Improvement as New Month Opens

By C. O. WILLSON
New York Bureau, The Oil and Gas Journal

NEW YORK, Apr. 2.—A new month of trading started today with little indication of an early end to the factors which have been disturbing this market for several weeks. Tank car prices on gasoline for domestic movement, which are more or less nominal so far as new business is concerned, are quoted over the same general prices as prevailed a week ago with the exception of New England points where price cutting has been reported. Middle octane material is reported to have been offered at Boston and other points as low as 6 cents, although most of the major companies continues to quote 6.45 and 6.5 cents. Export quotations on gasoline at the Gulf Coast are generally one-fourth cent lower than last week.

Residual fuels, which advanced last week, are firm at the higher levels and predictions are heard that quotations will go to higher levels provided the crude oil situation is ironed out satisfactorily in the southwestern states and California. There has been a seasonal decline in the demand for furnace oils and the spot demand for kerosene also is less active. Several sellers who advanced their prices one-fourth or more cents per gallon during the threatened famine period of early March have returned to their former quotations.

Although the movement of furnace oil to consumers will continue to decrease until late summer it is not believed that the base tank car prices established last winter will decline barring a general collapse in crude oil and refinery price structures.

Price Advances Reflect Improvement

A year ago furnace oils were selling from one-half to three-fourths cent per gallon under the present market and bunker fuel oil, which is now quoted at $1.20, was bringing 75 cents per barrel exclusive of lighterage charges. The advance in these products reflects an actual improvement in the relative situation as regards supply and demand which developed despite a continued overproduction of gasoline during the same period.

Price changes on Pennsylvania grade lubricants are unchanged. The demand is less active but supplies are so limited for immediate shipments that sellers continue to report difficulty in securing certain stocks and low cold test neutrals. Mid-Continent stocks and neutrals are easier in this market and the Gulf Coast oils are more freely offered. Inquiries for wax have dropped off in both the domestic and export markets. Price shading is reported in domestic sales of small quantities but the major manufacturers have not announced any changes in their prices.

Gasoline Market Shaky

The gasoline market in this territory is conceded to be shaky regardless of the angle from which it is approached. Offerings by independents who have bulk terminals at seaboard points indicate that they have purchased some cheap gasoline recently at the Gulf Coast, presumably emanating from East Texas. Some of this gasoline in closed transaction is reported to have been figured on a delivered basis of 5 cents at the water terminal. It is also claimed that this gasoline comes well within the octane range of middle grade gasoline (60-64.9 octane) and that in distillation range it is better than the usual U. S. Motor material. Major refiners are quoting U. S. Motor gasoline of this octane range at a minimum price of 5¾ cents, f.o.b. refineries or terminals.

The independent sellers are offering their material at 5¼ and 5½ cents to jobbers in tank car and small barge lots. They claim these prices are necessary to meet the tank wagon and service station competition of the major sellers. They affirm that the latter, while maintaining tank car prices, continue to offer various type concessions to tank wagon and service station buyers so that in effect their net back at the seaboard is in line with the tank car prices they are quoting to independent jobbing interests.

Order Finds Small Favor

Regardless of the merits of these particular claims, it is certain that the matter of contract terms covering the various types of delivery to all classes of distributors and consumers is as much upset as it was earlier in the year. The order of the oil administration at Washington establishing a maximum spread of 2 cents between service station and tank wagon prices and setting up certain discounts for commercial accounts did not find favor among most of the sellers in this territory. The orders at the time they were announced were made retroactive to last August and all contracts made in violation of these contracts were supposed to be canceled. A strong effort was made here to have the cancellation clause apply only to those contracts made since February 1, but this request was refused last week by the oil administration. As the situation now stands, all contracts made since last August which do not conform with the Government's ruling are supposed to be canceled immediately.

Under all contracts made since last August special concessions are being given to the large commercial consumers and there also are wide differences in the amounts allowed for tank wagon deliveries and service station deliveries. Large commercial consumers are buying their gasoline delivered in tank wagon lots at prices which are only a fraction of a cent above the supposed tank car prices. This includes branded products in some cases.

These conditions are mentioned here because it is around this phase of trading rather than tank car prices that competition centers in this territory, a situation which is in contrast to the Mid-Continent, where the open tank car market is the controlling price factor for contracts as well as spot shipments. It is assumed that the Government will shortly resort to any legal means necessary to enforce its orders and there are various rumors afloat in the trade as to what will be done.

Danger Reduction Will Spread

In the meantime there is the danger that the 1½-cent reduction made effective in tank wagon and retail prices for regular and premium grade gasolines in metropolitan New York on March 23 will spread over a wide territory. Discussions in regard to this situation are tied in with the efforts being made to strengthen the gasoline market through curtailment of production. Plans in this connection are to be aired this week at Washington and a majority of the trade feel that all prices will remain unchanged until the reaction of the oil administration to the several panaceas is known.

Export Gasoline Lower

Lack of new buying and competition from European and South American refineries has brought another reduction in export gasoline prices at the Gulf Coast. Prices quoted range from 4¼ cents for the U. S. Motor grade to 4¾ cents and 4⅞ cents for the 64-66, 375 endpoint grade. There have been inquiries in the market for May and June delivery, but so far as known no important spot business has been placed with sellers in this country over the past 10 days.

Prices on export kerosene at the Gulf Coast are unchanged. Kerosene is generally moved to foreign buyers in part cargoes and the fact that gasoline shipments have decreased has been reflected in a slow kerosene demand. Quantities available, however, are limited and sellers generally are quoting a low of 4¼ cents for the 41-43 water white grade.

American Petroleum Institute Weekly Refinery Statistics

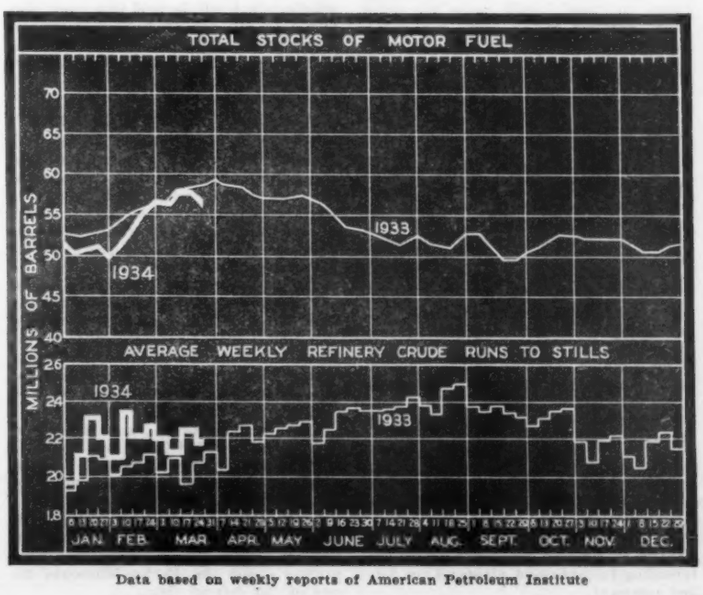
Figures below reported for week by American Petroleum Institute. (1) Per cent refinery capacity represented. (2) Daily average crude runs to stills. (3) Total motor fuel stocks. (4) Gas oil and fuel oil stocks. All figures in 42-gallon barrels.

Week Ending March 31, 1934, Compared to Week Ago

		Week ending March 24, 1934			
		(1)	(2)	(3)	(4)
East Coast		100.0	465,000	17,244,000	5,436,000
Appalachian ...		92.6	82,000	1,936,000	673,000
Ind., Ill., Ky. ..		97.3	290,000	8,716,000	2,926,000
Okla., Kans., Mo.		82.1	211,000	5,969,000	2,761,000
Inland Texas ..		60.2	85,000	1,494,000	1,627,000
Texas Gulf	A.P.I. refinery figures delayed.	98.1	445,000	5,164,000	4,277,000
La. Gulf		100.0	107,000	1,813,000	1,367,000
N. La. and Ark.		92.6	38,000	373,000	598,000
Rocky Mtn.		78.8	36,000	1,098,000	691,000
California		96.9	400,000	13,272,000	85,052,000
Total U. S. ...		92.4	2,159,000	57,079,000	105,508,000

Week Ending March 31, 1934, Compared to Year Ago

		Week ending April 1, 1933			
		(1)	(2)	(3)	(4)
East Coast		99.1	466,000	15,942,000	6,058,000
Appalachian ...		95.1	71,000	1,996,000	851,000
Ind., Ill., Ky. ..		97.5	313,000	8,803,000	3,438,000
Okla., Kans., Mo.		84.9	204,000	5,582,000	3,037,000
Inland Texas ..		56.4	74,000	1,692,000	2,163,000
Texas Gulf	A.P.I. refinery figures delayed.	97.7	396,000	6,546,000	6,288,000
La. Gulf		97.3	101,000	1,832,000	2,198,000
N. La. and Ark.		88 5	32,000	292,000	646,000
Rocky Mtn.		90.8	24,000	1,532,000	620,000
California		94.6	440,000	14,887,000	98,524,000
Total U. S. ...		91.6	2,121,000	59,104,000	123,523,000



Data based on weekly reports of American Petroleum Institute

NEWS FOR PETROLEUM REFINERS

East Texas Refiners to Observe Stricter Rules

LONGVIEW, Tex., Apr. 2.—East Texas independent refiners meeting here in the past week voted that they would conduct their business under the same requirements as the major companies as to price paid for crude, credit extension, observance of the oil code and obedience to rules and regulations of state and Federal bodies.

This vote was taken on a motion by J. D. Wrather and seconded by Jules Constantin.

No definite action was taken with respect to the details of working out a plan whereby major oil operators have agreed to allocate 5 per cent of their crude runs to supply independent plants. Definite action in this direction was postponed.

The committees representing various interests participating in the session here this week follow:

Representing the majors: Jack Pew, Dallas, chairman, representing the Sun Oil Co.; E. B. Marlow of Sinclair, Jack Levering of Stanolind, B. L. Clardy of Shell, John R. Suman of Humble and Joe H. Russell of Gulf.

Jules Constantin and Frank C. Adams, president and secretary, respectively, of the East Texas Independent Refiners Association, headed their committee, which was composed of: N. L. Webster, Southern Oil Refining Co., Tyler; A. S. Robertson, LaPren Refining Co., Kilgore; R. B. Knight, Carnation Refining Co., Gladewater; R. S. Harper, Tyler Refining Co., Arp.; G. A. Sadler, Tyler Refining Co.; J. D. Wrather, Overton Refining Co., Overton; W. F. Anderson, Chief Refining Co., Gladewater; O. D. Adams, Shoreline Refining Co., Kilgore.

Delicacy of the crude oil market was the subject of much informal discussion at Austin Wednesday when the Railroad Commission held its statewide proration hearing. Informed oil men expressed the view that elimination of "hot oil" would be almost immediately reflected in a 25 cents per barrel advance. Some of them thought continuation of present conditions may mean a step in the other direction.

Despite efforts of the East Texas refiners to "peg" retail price for third grade gasoline at 15 cents per gallon through an agreement that tank trucks selling to retailers posting a lower price will not be served from the docks, considerable chiseling continues in evidence.

F. M. Lege, Jr., of Dallas, state marketing chairman and chairman of the session, said:

"A strongly optimistic feeling prevails among the leaders who took part at the conferences. We believe that, while all the ills of the refining and marketing ends of the business have not been solved, much progress was made and they are on the way to settlement soon."

Thirteen of the 30 East Texas independent refinery representatives attending signed the marketing agreement, with the proviso that 50 per cent of the East Texas refining capacity be signed up. A meeting of independent East Texas refiners was called at Gladewater for Monday night to hear reports on progress of the stabilization movement.

EAST TEXAS REFINERY FIRE

The Hawk Refining Co. and Eagle Refining Co. plants in south Gladewater, were partly destroyed by fire on March 29, fire starting in the latter plant and spreading to tanks and plants of the former company.

NEW PLANT AT FRIAR SWITCH

Pat Farley is building a small plant at Friar Switch in Rusk County. The name of the company organized to erect and operate this plant is the Friar Switch Topping & Refining Co.

UNITED ADDS TOWER

WARREN, Pa., Apr. 2.—The United Refining Co. has awarded contracts for erection of a new fractionating tower 116 feet in height and weighing 72 tons to the Hammond Iron Works of Warren. The new equipment is to be ready for use July 1.

MODEL BUILDING REFINERY

The Model Refining Co. is building a small skimming plant on Magnolia Petroleum Co.'s Bradbury lease at Reed Switch just southwest of Kilgore. T. J. Mullin and others are owners of this company and plant.

WOFFORD OIL ADVERTISING

ROME, Ga., Apr. 2.—"The Wofford Oil Co. has announced an extensive advertising campaign, the biggest in its history, as an expression of their confidence in the return of better business conditions," said A. D. Littlejohn.

KEYSTONE BUILDING PLANT

MUSKEGON, Mich., Apr. 2.—The Keystone Refining Co. of Detroit is constructing a new Michigan plant which will have a capacity of 500 to 1,000 bbls. of crude daily.

E. G. Guy, former superintendent of the Old Dutch Refining Co. plant at Muskegon and of the Roosevelt Refinery in Mount Pleasant, is in charge of construction of the new plant for the Keystone company.

TO VISIT GULF REFINERY

The Gulf Refining Co. has invited members of the National Petroleum Association to inspect its new refinery and laboratory at Pittsburgh, probably on either May 21 or 22, 1934. This visit will constitute a joint meeting of the Department of Standards and Tests and the Department of Manufacture.

The particular date will be determined to allow all to take advantage of the meeting of the American Petroleum Institute, which will be held that week also. One year ago the group visited the Atlantic Refining Co. plant at Philadelphia and two years ago the Kendall Refining Co. plant at Bradford, Pa.

ACQUIRES PARCO REFINERY

The West Tulsa refinery of the Producers & Refiners Corp., now in Federal receivership, was sold to the Consolidated Oil Corp. for the minimum bid of $450,000 at the receiver's sale. No other bidder appeared and the award was accepted pending the final approval of the Federal court.

The tankage of the West Tulsa plant, and stored crude oil, gasoline, semirefined oil and other material, was not sold and a bid was received from the Consolidated for it, but the sufficiency of the bid will not be determined for some weeks, when the tankage will be checked.

Sinclair Refining Co., a subsidiary of the Consolidated Oil Corp., now operates a complete refinery in Sand Springs, Okla., a short distance from the purchased Parco refinery.

L. R. Crawford, former president of the Parco and one of the receivers, will leave this week for Wyoming to sell at receiver's sale the Rocky Mountain assets of the defunct firm.

Tide Water Uses Indicator in Detecting Substitution

The Tide Water Oil Co. has developed the use of chemical indicators in its gasoline that will enable inspectors to detect the addition of any outside material. A campaign of publicity has been been started and might lead to the adoption of similar means of detecting substitution and adulteration by other companies as part of the program to make sure the consumer gets what he thinks he is getting when he buys advertised brands.

The new Tide Water campaign is based on two factors: a newly developed liquid called "secret detector" and frequent inspection of the gasoline.

The "secret detector" has been incorporated in all Triple X Tydol since May 15, 1933, and samples totaling thousands of gallons have been collected from among the company's 20,000 dealers throughout the country.

The company's announcement says: "In order to protect our customers and dealers more adequately, there has been developed an identifier which goes into every drop of Tydol. This substance, referred to as the 'secret detector,' has been incorporated in the manufacture of Triple X Tydol since last May and thousands of tests have been made throughout the sales territory to demonstrate that it is an accurate, prompt and infallible indicator of the fact that Triple X Tydol is in use. The indicator will detect small percentages of dilution.

"The method used in the test is simple. A 4-ounce bottle is filled with Triple X Tydol to within 1 inch of the top and then a small vial containing an exact amount of 'developer' is poured into the bottle and this mixture is shaken. After a few seconds, a purplish pink layer will be seen to settle at the bottom of the bottle. A certain density of color is noted and any fainter color indicates dilution, while there is no color whatever in gasolines which do not contain the indicator. It is harmless and cannot cause motor misfunctioning."

OIL CODE PROTESTS

The Colorado oil marketing committee, of which W. E. Thomas is chairman, held a meeting in Denver the past week to hear protests on alleged violations of the marketing code. The meeting was attended by Norman Lyttell, supervisor for the NRA in Washington; J. W. Cook, of Salt Lake City, regional supervisor, and representatives of a number of oil companies. The findings of the committee will be forwarded to Washington.

START KILTEX REFINERY

The Kiltex Refining Co. has just started operating its small refinery in the Kilgore area, Gregg County, and the Star Creek Refining Co. is now operating its new topping plant on the Luling Oil & Gas Co.'s Brightwell lease in the Kilgore area.

ANOTHER GLADEWATER PLANT

The Texas Oil Products Co. has erected a small refinery near the Gladetex Refining Co.'s plant at Gladewater in Gregg County. This plant was constructed of material brought from San Antonio and which was formerly owned by the Grayburg Oil Co.

ANOTHER REFINERY AT KILGORE

Albert Knight, formerly with the Railroad Commission, is building a small refinery on the Marine Oil Corp.'s Bean lease on the Kilgore area.

ROCCO ADDING STILL

Rocco Oil Co. is building a tube still addition to its boiler type topping plant at Kilgore in Gregg County.

IOWA TAX SUSTAINED

WASHINGTON, D. C., Apr. 2.—The Iowa 3-cent tax on gasoline imported into that State was sustained today by the Supreme Court.

MURPHY ADDRESSES MEETING

CHICAGO, Apr. 2.—George B. Murphy, manager of the Riverside laboratories of Universal Oil Products Co., Chicago, addressed a luncheon meeting of the Kiwanis Club, at La Grange, Ill., on March 22. His subject was "The Antiknock in Gasoline."

WHITE STAR BUYS STATIONS

MUSKEGON, Mich., Apr. 3.—Purchase of Cardinal-Dixie Co. distributing system here and vicinity including 150,000-gallon storage and 14 service stations by White Star Refining Co., of Detroit, at about $125,000 was announced today. Muskegon's port terminal with facilities for boat shipments was a factor in the deal.

HASTEN ANTITRUST SUIT

AUSTIN, Tex., Apr. 2.—A motion to advance for an early hearing of the State's antitrust suit against 15 major oil companies and two trade associations was on file today in the Third Court of Civic Appeals here.

The motion, filed by the attorney general, was based on the statutory grounds that antitrust cases are to take precedence over all other business of a civil nature and that cases in which the State is a party are to be given precedence.

LEASE EAST TEXAS PLANT

The Petroleum Processing Corp., a subsidiary of the Eastern States Petroleum Co., Inc., of New York, has taken a lease on the East Texas Oil Refining Co.'s 6,000-bbl. refinery at Friars Switch in Rusk County and will begin operating same on crude gathered by independent lines. The East Texas Oil Refining Co. also has a gathering line connected with the refinery, which was not included in the sale of the company's producing properties in the field to the Magnolia Petroleum Co. The East Texas Oil Refining Co. has two other plants in the field, one across the tracks from the above mentioned plant at Friars Switch and a larger plant at Longview.

IMPORTANT TAX CONVICTION

CHICAGO, Apr. 2.—Gasoline tax evasion in the Central States has been dealt a telling blow in recent convictions obtained in a key tax evasion case brought to trial in Chicago, law enforcement and tax collection authorities believe.

The case is that of the State of Illinois against officials of the Consumers Gas & Oil Co., Chicago, who have been sentenced to serve one to two years in the state penitentiary and to pay fines of $3,000 each, for conspiracy to defraud the State of $125,000 by evasion of the state motor fuel tax law.

These men are Sam Levin, Al Johnson and Max Johnson. Some three years ago they and numerous others were indicted. Later the charges were stricken with leave to reinstate when they promised to make restitution. Only a few payments were made. Charges were reinstated but the defense attempted to shift the blame to the late Garret Kinney, state finance director, who committed suicide several months ago. Following conviction, the defense filed motion for a new trial.

NATURAL GASOLINE MANUFACTURE

California Adds to Its Natural Gasoline Stocks

Although natural gasoline production in California declined in February from the previous month and refineries increased their demand for the product the industry added to its stocks to bring the total to 2,463,799 bbls. by the close of the month, according to the Pacific division of the Bureau of Mines.

The daily average output of natural at plants in the State totaled 31,154 bbls. during February, a decrease of 1,081 bbls. from the previous month's average. Refiners, however, used 620 bbls. daily, or a total of 25,226 bbls. per day. Despite these improved conditions, stock rose at the rate of 2,799 bbls. per day or over the month, added 78,383 bbls. to storage.

The Kettleman Hills area accounted for nearly one-third of the State's output of natural gasoline for the month, the field accounting for 11,582,219 gallons of the 37,107,029 for the State.

Supply

(Barrels, daily average)

	Natural gasoline including liquid petroleum gas	
	February	January
Total production	32,076	32,919
Stock trans. (deliv.) receipt—net	(73)	(139)
Net total	32,003	32,780
Deduct refinery requirements:		
Run to stills	4,192	4,494
Blended	21,034	20,112
Total	25,226	24,606
Natural gasoline—net	106	....
Net current supply available for market.	6,883	6,369

Demand

Domestic demand	1,074	508
Shipments: Pacific foreign inc. Canal Zone.	2,110	....
Total market demand	3,184	508
Losses (gains) unaccounted for—net	900	....
Total current demand	4,084	508
Surplus or (deficit)	2,799	5,861

NATURAL PRODUCTION BY FIELDS

Field—	Gas treated (thousand cu. ft.)	Natural gasoline produced (gallons)
San Joaquin Valley—		
Elk Hills	77,363	128,063
Kettleman Hills	9,291,186	11,582,219
Midway-Sunset	1,183,378	2,071,229
Mountain View	33,100	50,274
Miscellaneous	392,586	347,100
Coastal Region—		
Elwood	377,376	647,081
Rincon	70,788	82,769
Santa Maria	162,557	411,821
Ventura Avenue	3,544,254	3,469,587
Miscellaneous	193,869	210,564
Los Angeles Basin—		
Coyote	351,518	644,215
Dominguez	688,176	1,168,811
Huntington Beach	1,910,053	2,678,466
Inglewood	99,428	166,709
Long Beach	1,876,016	5,376,266
Playa Del Rey	193,401	546,951
Richfield	419,681	398,630
Rosecrans	388,961	586,168
Santa Fe Springs	3,057,339	4,816,695
Seal Beach	483,628	738,098
Torrance	95,361	206,384
Miscellaneous	275,891	844,929
Total (all fields)	25,145,910	37,107,029

DISTRIBUTION

(Gallons)

	Supply	Demand
Stocks beginning of mo.	3,170,278	.....
Production during mo.	37,107,029	.....
Delivered to refineries	.....	35,533,590
Delivered to jobbers, brokers or blenders...	.....	1,598,774
Blended at plants for production of motor fuel	.....	2,155
Losses	.....	148,621
Stocks end of month	.....	2,994,167
Total (to balance)	40,277,307	40,277,307

	Gallons
Liquefied gas production	614,258
Motor fuel produced	4,405

Growing Importance of East Texas Area Prompts Organization of Association

FORT WORTH, Tex., Apr. 2.—Manufacturers in the East Texas Field have organized the East Texas Natural Gasoline Association for the purpose of strengthening and stabilizing the price structure of their product in the several plants now operating and under construction in the field. The price of such gasoline is now 1¼ cents per gallon whereas the price of gasoline manufactured in the refineries is selling between 3 and 3½ cents per gallon.

Officers of the newly organized association are: J. B. Atkins, of the Parade Gasoline Corp., Shreveport, president; J. B. Beard of the Hercules Gasoline Co., and Keith Jones of the Gregg-Tex Gasoline Co., both of Shreveport, vice presidents, and O. K. Dykes of the Lisbon Gasoline Co., Shreveport, secretary-treasurer.

There are now 12 gasoline plants operating in the field, the Humble Oil & Refining Co. and Gulf Production Co. being the only two major companies owning and operating plants in East Texas. The former company has two plants, one at Kilgore and the other near London in Rusk County. The Gulf Production Co.'s plant is just east of Overton in the same county. The Sinclair Prairie Oil Co. is building a 12-unit plant at Camp Switch in Gregg County.

The Lisbon Gasoline Co. is building an eight-unit plant just west of Carlisle in the southern part of Rusk County and the Hanlon-Buchanan, Inc., is building an 11-unit plant northeast of Gladewater in northwestern Gregg County. The Lisbon Gasoline Co. has a plant north of Carlisle in southern Gregg County; same has been operating for the past two years, and gasoline from the second plant near Carlisle will be stabilized in this first plant.

The plants in the field now operating are as follows: Gladewater Gasoline Co. at Gladewater. Officials are: G. J. Smith, C. R. Samples, W. H. Harrison and R. L. Ames. It is a compression plant having seven Ingersoll-Rand units with seven 90 horsepower Superior engines. It has been operating since January 31, 1932. It has a Tulsa type stabilizer.

The Gregg-Tex Gasoline Co., whose officials are K. E. Jones and H. R. Dickerson of Shreveport, has a four-unit, four twin cylinder 400 horsepower Clark motors and compression plant north of Willow Springs in Gregg County. It started operating November 1, 1933.

The Gulf Production Co.'s plant is a compression type, having six units, six 175 horsepower Bessemer engines. It is just east of Overton in Rusk County. It started operating in June, 1932.

The Harmony Gasoline Co. (formerly Arkansas Fuel Oil Co.) has a 10-unit, six 80 horsepower Cooper Bessemer engines, north of Willow Springs in Gregg County. It started operating April, 1932.

The Humble Oil & Refining Co.'s London plant in Rusk County, is a compression type plant having 21 units, using 21 Clark engines of different horsepower. It started operating in October, 1931. The same company has a five-unit plant west of Kilgore. It has five Cooper-Bessemer engines. It started operating in October, 1931, also.

The Lawrence Gasoline Co., owned by Lawrence and others of Dallas, is located 2 miles south of Kilgore. It has only one unit, an 80 horsepower Bessemer engine and compressor. This plant is operated only intermittently.

Lisbon Gas Line Co., whose manager is O. K. Dykes of Shreveport, has a 12-unit compressor plant with eight 80 horsepower Bessemer engines, 3 miles southwest of Joinerville in southern Rusk County. It started operating April, 1932.

Chief Refining Co. (V. O. E. Wright and others) has a one-unit plant in conjunction with its refinery on the east outskirts of Gladewater in western Gregg County.

The Hercules Gasoline Co., whose manager is J. L. Dales of Kilgore, has a two-unit plant just west of Kilgore in Gregg and is adding more units to the plant and connecting to more wells in the area. It started operating in February of this year.

The Parade Gasoline Co.'s plant, formerly called the Excelsior Refining Co., is located 2 miles south of London in Rusk County. It has had only three units until recently when more units were added to the plant, about 40 miles of more gathering lines were laid and the Hunt Production Co. of Tyler took an interest in the plant. J. B. Atkins of Shreveport is manager of the company. The plant is of the absorption and compression type. It started operating August, 1931.

The Tall Pines Natural Gasoline Co. has a compression type plant with two improved Watts Miller engines and compressor, a short distance southwest of Kilgore in Rusk County. It started operating the fore part of 1934. The Upshur Gasoline Co. has a small plant near

(Continued on Page 33)

MAY BUILD CANADIAN PLANT

CHATHAM, Ontario, Apr. 2.—Plans are under consideration for the erection this spring of a gasoline absorption plant at a cost of $150,000 to $200,000 in the South Turner Valley Field of Ontario, Canada. This project will be handled by a separate company, which will likely be known as Mayland Gas & Oil Products, Ltd. Mercury Oils, Ltd., Miracle Oils, Ltd., Wellington Oil & Gas Co. and the East Crest Oil Co. will hold an interest in the new plant which will treat gas from their local wells.

It is understood the Mercury company will have a 20 per cent interest in the plant, and the other companies will share in proportion to the amount of gas they deliver. Mercury Oils' No. 6, LSD 12, Section 4-19-2w5, which has been standing for some years at around 2,000 feet, will likely be continued to the crude naphtha horizon this season.

APPEAL CLYMORE DECISION

AUSTIN, Tex., Apr. 2.—The Railroad Commission set for rehearing at Corpus Christi on April 16 the petition of Garland Clymore for a rehearing of his application to use natural gas in the Agua Dulce Field, Nueces County, in the extraction of gasoline.

Recently the commission granted Clymore's application but the order stipulated that he must return to the same sands or horizon all gas not actually used in gasoline extraction operations.

Clymore wants that requirement eliminated on the grounds that it is impracticable and impossible.

Texas Commission Reports to Senate Investigators

AMARILLO, Tex., Apr. 2.—On April 9 arguments for and against the present practice of processing natural gas through plants in the Panhandle without utilizing the residue for light or heat will be heard as part of the Texas senatorial investigation under the resolution approved by that body prepared by John S. Redditt. He will attempt to determine whether there is loss, theft, waste and dissipation of oil and gas in Texas and to determine the loss in taxes and other revenues suffered by the State and to determine appropriate legislation to correct same.

In the past week the Texas Railroad Commission prepared a report for consideration by the senate committee in which Lon A. Smith, chairman of the commission, and Ernest O. Thompson, a member, justified the commission's action in the past by stating in part as follows:

After the granting of a few permits and the subsequent passage of the Sour Gas Law, three new gasoline plants have been constructed in the Panhandle and two or three old plants, formerly closed down, are again operating. These plants have given a satisfactory market to practically all of the unconnected wells in the area.

The gas now being used for carbon black and natural gasoline manufacture is an additional revenue to the Panhandle and brings in much more money to the Panhandle people than does the payments from the gas utilities. At present there are 1,100 men employed in the production of natural gasoline. There are 48 natural gasoline plants in operation. There are an additional 1,000 men employed in the carbon black plants. The total payroll of these two enterprises amounts to approximately $3,795,000 yearly. The estimated total taxable value of gasoline and carbon black plants amounts to $20,000,000. During the year 1933, there was produced 5,306,139 bbls. of natural gasoline and 200,000,000 pounds of carbon black. This had a sale value of approximately $14,000,000. In 1934, these revenues will increase and there will be more men employed. The gas pipe line companies produce their requirements from their own wells and buy no gas. Their total payments in royalties are about $400,000 a year and they pay out in rentals on undeveloped acreage approximately an additional $200,000 a year. As a source of revenue and employment of labor, it is nothing like as important to the Panhandle as the carbon black and natural gasoline industries.

It is a very difficult matter for us to recommend just what steps the legislature should take toward the correction of this problem. Conservation naturally involves control of production by the body entrusted with the regulation of the production, in order to protect the various interests involved, and, unless a statute can be written in such a manner that it will withstand the attacks of the gas pipe line interests in the Federal Courts, the State cannot continue its original conservation policy to the point of appropriating the properties of producers without a light and fuel market and delivering them to the pipe line companies with a monopoly on such market. It is possible that if a properly drawn bill was enacted to effect a complete divorcement of the pipe line companies from their producing subsidiaries and a constitutional bill was enacted to

(Continued on Page 33)

Late Fields

MICHIGAN

MUSKEGON, Mich., Apr. 3.—Pure Oil Co.'s No. 2 Willie, SW NE Section 5-14n-6w, Broomfield Township, Isabella County, struck oil 14 feet in the Dundee limestone and filled up several hundred feet indicating a possible new oil pool in an area previously developed as one of two biggest shallow gas pools in Michigan. This district now has 23 gassers producing from the Michigan series at 1,300 to 1,400 feet. Pure's No. 2 is first Dundee test to be drilled in the area.

Muskegon Oil Corp. also has developed a 5 to 10-bbl. oil show in No. 1 William Vandermade, SW NE Section 26-10n-15w, Egleston Township, Muskegon County, after shooting Dundee pay encounttred at 2,295-2,301 feet.

ATLANTIC EAST TEXAS DEAL

DALLAS, Tex., Apr. 3.—Atlantic Oil Producing Co. has option to purchase American Liberty Oil Co. properties in East Texas Field and is now making inventory. There are 125 wells on 25 leases involved, all leases except two being in Rusk County, covering 1,560 acres. Consideration was named as $1,600,000 cash and $4,400,000 out of oil.

Big Foreign Delegation to Tulsa Exposition

Completion of every detail to make the eighth International Petroleum Exposition and Congress in Tulsa May 12 to 19 a success is going forward at a rapid rate, according to William B. Way, general manager.

Indication that a large foreign delegation will be present at the exposition is seen in a letter received by Manager Way from the Hamburg-American and North German Lloyd steamship lines. It says: "Our European offices have received several inquiries from persons who are planning to visit this exposition, and in order that our home offices may be in a position to furnish some information to prospective participants, we would thank you to send us a prospectus or any other literature which you may have published."

Delegates from England, Canada, Germany, Mexico, Portgual, Russia, Ecuador, Honduras and Italy have written Mr. Way they will visit the exposition. The official delegates are Senor Dr. Don Miguel Paz Baraona of Honduras; Senor Capitan Colon Eloy Alfaro, Ecuador; N. V. Vannikoff, Russia; Signor Romolo Angelone, Italy; Dr. Abel de la Cueva, Mexico; Werner Muller, Germany; W. J. Maughan, Calgary, Alberta, Canada. Other official representatives are to be appointed later.

"Much interest from abroad is being manifested in the International Petroleum Exposition and Congress," said Mr. Way, "and we expect the attendance this year to equal that of the last show in 1930 when 21 foreign nations were represented.

"There is a complete sell-out of booth space in four of the huge exposition buildings," Manager Way said. "They are the Texas, Oklahoma, Refiners and Marketers and Scientific and Technical buildings. We expect the space in the California building to be sold out by the opening of the show in May. There are now 342 contracts signed by different companies for space and since many of these are exhibiting for several different firms between 700 and 800 firms are represented in exhibits already contracted for."

MAGNETIC STORM

Tucson, Ariz., observatory of the U. S. Coast and Geodetic Survey report moderate magnetic storm started March 28 at 12 noon and lasted until 4 a.m. March 30, Central Standard time. Their telegrams read: "Storm began twenty-eighth. Eighteen. Moderate." "Storm ended thirtieth. Ten."

April Schedule of Gasoline Production Slightly Increased to Meet Demand

A slight increase in the allowable production of gasoline for April, to become effective April 1, was announced today by Secretary of the Interior Harold L. Ickes, the oil administrator.

April production was fixed at 31,910,000 bbls., as compared with 31,791,000 bbls. for March. The increase was authorized to meet the increased consumptive demand brought about by the arrival of spring.

Administrator Ickes' order provides that the allowable gasoline production in the refining districts shall be allotted to the refineries by the Planning and Coordination Committee, subject to the approval of the administrator.

The text of the order follows:

Refinery Gasoline Production Allocation For April, 1934

Be it resolved:

1. That the gasoline production (at refineries including straightrun, cracked and natural gasoline blended) in each of the various refining districts for the month of April, 1934, shall not exceed the following:

(42-gallon barrels)

	District—	Bbls.
1.	East Coast	5,500,000
2.	Appalachian	1,475,000
3.	Indiana-Illinois-Kentucky	4,890,000
4.	Oklahoma-Kansas-Missouri	4,400,000
5.	Texas:	
	(a) Inland Texas	2,555,000
	(b) Texas Gulf Coast	5,300,000
6.	Louisiana-Arkansas:	
	(a) Louisiana Gulf Coast including Alabama	1,100,000
	(b) North Louisiana-Arkansas including Mississippi	900,000
7.	Rocky Mountain	660,000
8.	California	5,130,000
	Total United States	31,910,000

Equipment Manufacturers Discuss Problems of Code

Complying with the requests of members of the Mid-Continent and Rocky Mountain division of the Petroleum Equipment Industry and Trade, a subdivision of the NRA, Maj. Stiles M. Decker, administration member of the national code authority, made a trip to Tulsa from Houston, Tex., last week to explain the progress made and discuss detailed and specific problems with various associations representing different groups of manufacturers and dealers in equipment and accessories used in the petroleum industry.

At a meeting held in the Tulsa Building on March 29, presided over by J. L. Shakely, chairman of the Mid-Continent and Rocky Mountain division of manufacturers and dealers, and assisted by Earl Miller of Oklahoma City, vice chairman, Major Decker outlined the ideas and ideals of the Recovery Administration authorities and in particular said that the code of the Petroleum Equipment Industry and Trade is a living document.

"If you are not satisfied with it," stated Major Decker, "it can be changed. Should you feel that any provision ought to be removed, added to or changed, the proper method of securing the alteration is to write your code authority, Clyde Ellwood, with headquarters in the Tulsa Building, Tulsa, setting forth your views on the matter. Such requests will be carefully considered and, if found worthy, they will be forwarded to Washington, D. C., with the recommendation that the changes be made. At an open hearing on the matter, at which time the proposition will be discussed at length, if the Government is of the opinion that the change should be made, the code will be altered to conform to the new needs."

Major Decker explained that the code is in effect and has been in effect since November 13, 1933. Whether the manufacturer, dealer or distributor has signed does not alter the fact that he is liable for $2 minimum dues for each month since the code was made effective and nonpayment of dues is an offense that may be penalized by the code authority.

CANADIAN REGISTRATIONS

OTTAWA, Canada, Apr. 2.—Official figures recently issued by the Federal Department of Trade and Commerce show that with a population of slightly more than 10,0000,000, there were, in 1932, a total of 1,114,503 motor vehicles in Canada. In that year each vehicle used an average of 452 gallons of gasoline.

Broad Experience Helpful in Brown's Many Duties

(Continued from Page 10)

ducers, and refiners know large numbers of those in the same branch of the industry, and while marketers have wide equaintance among other marketers, Mr. Brown, through his long activity with the Independent Petroleum Association of America, had literally hundreds of acquaintances in each of these branches of the industry. He not merely knew these men, he knew also their position on various questions that might arise and had an acquaintance with the various problems such as few other men had possessed. This enabled him to co-ordinate the thought of the industry and to be of unusual service to the committee.

Since he had been an advocate of co-operation between the conflicting elements in the industry and, as an officer of the Independent Petroleum Association, had been accustomed to trent with fairness the majors, while standing firmly for the rights of the independents, he was in a strategic position to view the industry as a whole. As few others, he realized that the ills which afflicted one branch of the industry often had an origin in another branch and that the troubles in one division could not be healed until their source in some other field had been removed. While producers saw only producers' problems and refiners thought the refiners' question was the most significant, although marketers disputed both of these, holding that the distribution problem was of transcendent importance, he saw that the problems of the industry were the problems of the industry as a whole. Through his diplomacy, he has brought large numbers of men to understand that co-operation is the only method by which the industry can be put upon a sound basis.

Works Well With Ickes

It happens curiously enough that Mr. Brown was the first oil man to become intimately acquainted with Secretary Ickes, having met Mr. Ickes on the day of his arrival in Washington to take up his duties, and having worked out with him the plans for the famous March conference in 1933, out of which grew a fuller statement of the industry's problems than had previously been possible. Incidentally, Mr. Brown and Secretary Ickes attended the same college, have the same general background and are loyal to the same traditions. This has made it easier for these two men to co-operate than might have been the case had they been of more directly opposing attitudes.

Through his activity in legislative and other matters affecting the oil industry in Washington, Mr. Brown had acquaintanceships and friendships with practically every member of both branches of Congress and with all those government officials whose duties in any way concern or affect the petroleum industry. Since for a long time he was the only Washington representative of any petroleum organization with a national program and a national outlook, it was only natural that members of Congress and government officials turned to him when they desired information about any phase of the industry. This has increased his value to the Planning and Co-ordination Committee as its secretary and has made it possible for many things to be achieved in a short time and with a minimum of friction.

J. R. McWilliams Now With Carter Oil Co.

J. R. McWilliams, of Tulsa, who has been assistant state proration umpire for the Oklahoma Corporation Commission, resigned that post April 1 to accept a position with the legal department of the Carter Oil Co., under James A. Veasey to assist in handling details of proration affecting that company's properties in Oklahoma and Kansas. Mr. McWilliams will make his headquarters in the Tulsa office of the company.

Charles C. Brown, who has been with the proration department of the Corporation Commission for some time in charge of pipe lines, has assumed Mr. McWilliams' former duties and L. D. Smith, of Shawnee, has been made a deputy umpire to assume Mr. Brown's duties.

BUYS EAST TEXAS PROPERTIES

The Stanolind Oil & Gas Co. confirms the following purchases recently consummated for producing properties in the East Texas Field: Hunt Production Co.'s 35-acre R. F. Russell lease in the T. J. Martin Survey, Rusk County, Texas, with three completed wells; J. O. Whittington's undivided one-half interest in the Christian lease, being 27 acres in the G. W. Hooper Survey, Gregg County, Texas, with four completed wells. The remaining one-half interest in this lease is owned by F. N. Drane, R. C. Love and John R. Alford, but Stanolind will operate the properties; Lester & Duffield's full seven-eighths interest in their McKinley 9.94-acre lease in the G. W. Hooper Survey, Gregg County, Texas, with three producing wells, and their full seven-eighths interest in the McGrede 6¾-acre lease in the D. Sanches Survey, Gregg County, Texas, with one producing well; W. W. Lechner, Inc., and G. E. Hubbard & Son, Inc., full seven-eighths working interest in their Christian 17.46-acre lease in the G. W. Hooper Survey, Gregg County, Texas, with five completed wells partly equipped for pumping.

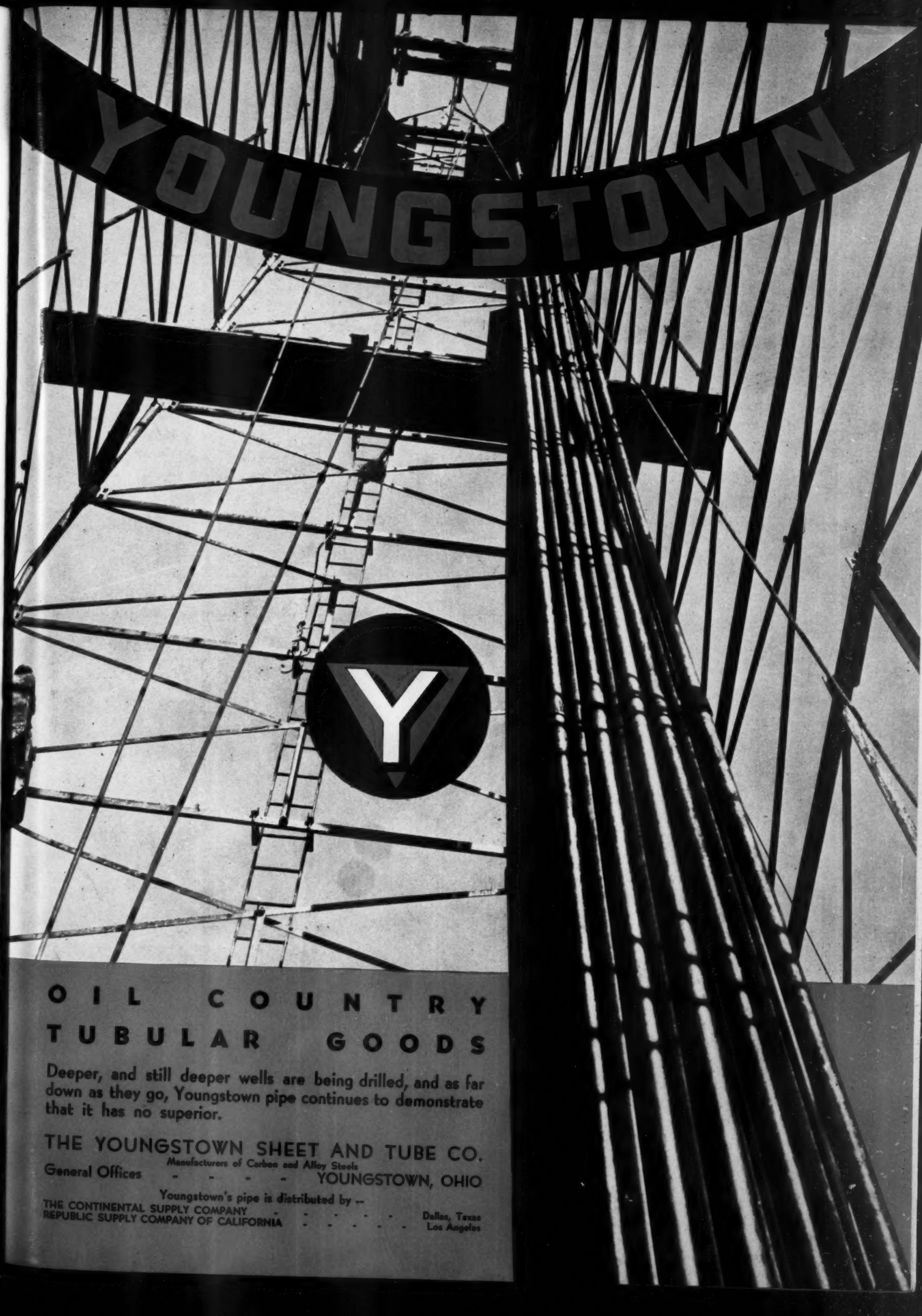
The above purchases involved a consideration of approximately $700,000, the major portion in cash with a small amount out of oil.

TO ROCKEFELLER CENTER

NEW YORK, Apr. 2.—Rockefeller Center is rapidly becoming an oil center with the Atlantic Refining Co., announcing that its local offices would be moved to the R.C.A. Building.

The Shell-Union Oil Corp., including its eastern marketing subsidiary, the Shell Eastern Petroleum Products, Inc., has completed the moving of their offices in the R.C.A. Building and now occupy space on the 37, 38, 39, 40 and 41st floors. Other companies whose main or district offices are located in this building include the Standard Oil Co. of New Jersey, Standard Oil Co. of California, Universal Oil Products Co., Chelsea Oil & Supply Co., and Republic Oil Co., Inc. The American Petroleum Institute now has its headquarters on the twentieth floor, and Socony-Vacuum Corp. whose main offices continue at 26 Broadway has two shops for advertising purposes on the ground floor.

The Anglo-Persian Oil Co. has its offices on the second floor of the British Empire Building which is part of the center.



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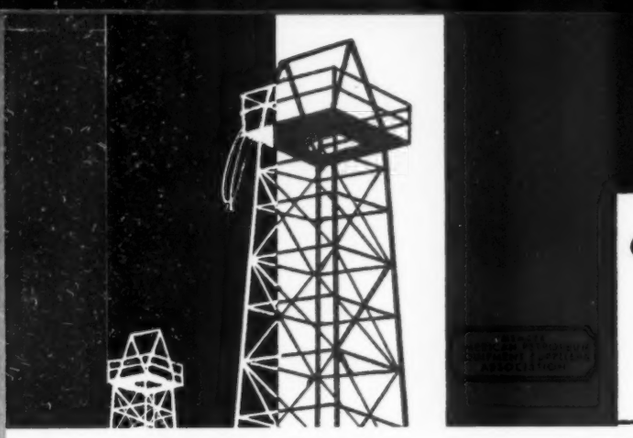

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CONTINENTAL

Texas R.R. Commission Receives Nominations

(Continued from Page 8)

been 30 new wells drilled in the last month caused by litigation.

Judge Black said a 15,000-bbl. increase for Yates would be entirely reasonable.

R. J. Boyle, San Antonio, asked that the Greta Field be given a substantial increase, as it is a new field with an increase of 50 per cent in the number of wells.

Mr. Boyle asked the commission to set a hearing to consider rules and regulations governing drilling to the Eagle Hill deep sands.

George Sears, Houston, asked that the commission "do right by the Conroe Field," with its increasing number of wells.

T. A. Hall of Gladewater said there is no change at Long Lake with two wells shut in and Cayuga with one producer and three drilling.

Three suits have been filed in the Travis County District Court seeking redress against the commission in the form of a mandatory injunction to permit the running of 14,489 bbls. of back allowable and they will form a test for the running of large amounts of back allowable oil by many producers similarly situated.

The plaintiffs who ask for orders permitting them to run back allowable at not more than 50 bbls. a day in addition to the current allowable, are Bullard Oil Co., 8,591 bbls.; West Florida, 3,268 bbls., and Dink Co., 2,634 bbls., all leaseholders in Rusk County.

Texas Commission Reports to Senate Investigators

(Continued from Page 31)

give us complete control of the gas production, we might regulate the withdrawals of gas from the field in such a manner as to allow all producers a ratable market and correct, as far as possible, the inequities that existed heretofore. However, with the conflicting interests of the sour gas producers, the sweet gas producers without a market, the production of the pipe line companies now having the sole benefits of the light and fuel market, the oil producers, etc., all to be adjusted, and this complex problem being further complicated by the fact that the previous withdrawals from the field have unbalanced the amount of gas now in place under the various properties throughout the field, it is almost impossible to suggest a solution that will cure the situation.

If the gas pipe line companise had seen fit to relinquish their monopoly on the market outlet and had been willing to take a fair proportion of the gas from the wells without any market whatever, it would have been a big step toward the constructive development of this field.

Importance of East Texas Prompts Organization

(Continued from Page 31)

Gladewater in Upshur County and has only one unit (compression type).

The majority of these plants extract from 2 to 2.5 gallons per 1,000 feet of gas in the field, the gasoline being shipped out in most instances by tank cars.

There is a dry gas area in the extreme southern part of the field, southern Rusk County, but gas wells in the area show more and more gasoline on drip or when gas is cracked through separators, gaining in such production the longer they produce. There are no gasoline plants in this area as yet, but as more wells are completed, there are now around 12 in this area, some company may make a survey and deem it worth while to erect a plant. The wells now produce a gas that contains around .50 to .75 of a gallon per 1,000 feet.

With producing wells in the field cut to the minimum under proration, as they are now, making it necessary to lay many miles of gathering lines to connect to a sufficient number of wells from which to take gas to operate natural gasoline plants, there can be but little incentive from now on for building other plants in the field, unless they are constructed with the idea of extracting the gas and using the residue for repressuring wells. Three plants now under construction are laying return gas lines to return the residue for repressuring and the other completed plants that have no such return lines will no doubt lay such lines for repressuring leases as they need it. Bottom hole pressures in the field are gradually falling, the average weighted pressure of the field now being 1,256 pounds, showing an 18-pound drop during the past two months. This gradual decrease will eventually bring many wells to the pumping or repressuring stage, a number of wells going on the pump every week, especially in the south and southeast part of the field where pressures are lowest. The gasoline plants in the field are so scattered that they are in good position to lay return lines for such repressuring work as will be permitted and necessary to lift the oil after the bottom hole pressures fall off to the stage where artificial methods of lifting it will have to be used.

J. H. HOGG DIES

OIL CITY, Pa., Apr. 2.—James Henry Hogg, 70, pioneer Pennsylvania oil producer, died at his home on the Plumer-Pleasantville Road. He had been ill for several months.

Mr. Hogg was born in 1864 at Two Mile Run, near Franklin, and entered the oil business when a very young man. He was associated with the National Oil Co. for many years and when that company reorganized in 1909 he became a partner and was in charge of the company's holdings as manager until 1925 when he retired.

Texas Commission Given Two Weeks to Stop Hot Oil

(Continued from Page 11)

showing they had been paid 40 cents per barrel for hot oil.

"If the new state law fails and Congress adjourns without giving us a tax law with which to check oil production and prevent violations, there will be a complete breakdown in regulations in the field," Mr. Weeks declared.

J. Edgar Pew said, "What we want to do is to produce oil in the best manner, to produce the fields the longest and get the most oil out of all pools before they are depleted. This will be best for the consumer and the producers will get the best price, and will also eliminate the loss of oil underground by trapping off by water." He felt that R. D. Parker, chief supervisor, should be put in charge of the forces of the commission, not only in East Texas, but in the whole State, and be given the power to hire and fire the men on the oil and gas staff.

Mr. Parker advised the meeting that if he was put directly in charge of the East Texas Field that "with your cooperation, we will get the job done."

Sidney Latham, member of the state house of representatives, from Longview, said, "We are in better position to get something done now than ever before." He said politics had hindered the industry and the enforcement of regulations. County and district attorneys also have their work to do in enforcing conservation laws, and he urged they should cooperate with the commission and the attorney general's department in the fight against violators. "A united effort is needed in the State to improve the situation," he stated, "and the Federal Government will step in if promises made here today are not fulfilled."

Jules Constantin, head of the East Texas Independent Refiners Association, wired that the independent refining companies in the field had accepted the proposals of the major oil companies, which tendered them 5 per cent of their daily runs in order to supply the demands of the small plants in the field, and that another meeting is to be held in the field on April 1 to discuss these plans further.

Resolutions Committee

Carl Estes was appointed chairman of the resolutions committee which is made up of the following: W. R. Nicholson, Longview; Rade Kangerga, Henderson; J. K. Wadley, Texarkana; Beeman Strong, Beaumont; George A. Hill, Houston; George S. Heyer, Houston; J. D. Collett, Fort Worth; J. S. Bridwell, Wichita Falls; Charles P. McGaha, president of the North Texas Oil and Gas Association, Wichita Falls, and Henry L. Bromberg, Dallas.

The arrangements committee is composed of J. Ben Critz, Dallas; Capt. J. F. Lucey, Dallas; H. M. Harrison, Longview; Edward T. Moore, Dallas; Allen V. Peden, secretary of the Texas Petroleum Council, Austin, and George N. Aldredge, of the oil committee of the East Texas Chamber of Commerce.

Those at the meeting voted to reconvene on April 16 to hear reports on the enforcement program carried on during the two weeks intervening.

The support of Charles I. Francis, special assistant to the U. S. Attorney General, was pledged in a telegram read at the close of the meeting, as follows:

"Regret that necessity for completing briefs in government cases involving injunctions issued by U. S. District Judge Bryant prevents my attendance of your meeting with the purpose of which I am in hearty accord. For the present effective aid by Federal authorities in East Texas. Enforcement problem has been practically nullified by these injunctions covering 144 producing and refining properties. Judge Bryant has declared the petroleum code and Federal regulations invalid, illegal and unconstitutional. I am confident these decrees will be set aside in the near future by court of appeals now pending or that the new legislation will restore Federal power to assist state authorities in suppressing existing unfair practices and conditions which threaten the welfare of the entire oil industry and jeopardize the best interests of the State of Texas. An aroused public opinion should demand an immediate cessation of this defiance of state law and commission rules."

WORLD CONGRESS PAPERS

"The Proceedings of the World Petroleum Congress," Vol. 1, containing papers and discussions on geological and production sections of the meetings held in London, England, July 19-25, 1933, are now available in book form. This first volume will be followed by Vol. 2 covering the papers on refining and marketing and general subjects. The papers are also available in a series of sectional volumes lettered "a" to "d" inclusive and bound in paper covers. Each section of the congress' activities is covered in these four volumes. They will all be available within about one month's time.

Abstracts from many of the papers were published in The Oil and Gas Journal in the issue of August 10, 1933. The complete papers and discussions are all very valuable to anyone interested in all departments of the petroleum industry and much information about fields outside of the United States is given.

Information concerning these books may be secured by addressing George Sell, joint-editor, World Petroleum Congress Proceedings, the Institution of Petroleum Technologists, Aldine House, Bedford Street, London, W. C. 2, England, or for Americans, W. J. Malloy, 8-10 Bridge Street, New York City. The prices are quoted in British currency, for Vol. 1, £1. 15s, and for the individual volumes from 10s. 6d. to 15s., with some discount to members of the Congress.

PIPE LINE CONSTRUCTION

The Stanolind Pipe Line Co., Tulsa, announces that a contract for laying about 50 miles of 8-inch welded pipe line in the system between Eldorado and Humboldt, Kans., has been let to Sheehan Pipe Line Construction Co., Tulsa, and the work is to be started soon. Material for this line will be furnished by the Stanolind Pipe Line Co. and the ditching, welding and laying of the line will be under the supervision of the Sheehan Pipe Line Construction Co.

This added line in this portion of the Stanolind Pipe Line Co.'s system in eastern Kansas will permit the daily handling of from 3,000 to 5,000 bbls. of additional oil and bring the total capacity of the outlet system to 18,000 or 20,000 bbls. per 24 hours.

The oil to be handled east of Eldorado, Kans., station is produced in the oil fields in west central and western Kansas, including fields as far to the northwest of Eldorado as the Fairport Pool, in Russell County, and the Hudson Pool, in Stafford County, to the southwest. The Stanolind Pipe Line Co. completed a gathering system serving all the fields between these two points during 1933, and the oil converges from the north and south and is there transferred to the Schurr station of the Sinclair Prairie Pipe Line Co., who transfer it to Eldorado station of the Stanolind Pipe Line Co.

This increase in capacity of the system east of Eldorado, Kans., is made to accommodate production recently made available to the Stanolind Pipe Line Co. for transportation to eastern terminals.

MUSKEGON, Mich., Apr. 2.—Michigan state officials to date have approved piping of natural gas only to three smaller industrial cities nearest the gas fields, Muskegon, Bay City and Saginaw. Consumers Power Co. is serving Bay City and Saginaw with gas from the Broomfield Township, Isabella County, Pool, while the American-Michigan Pipe Line Co., of Muskegon, subsidiary of the American Light & Traction Co., New York, recently was granted a permit to lay a 55-mile pipe line from the Austin Township, Mecosta County, Pool to Muskegon at an estimated cost of $500,000. These two pools, the only large dry gas areas as yet developed in Michigan, have an open flow capacity of 50,000,000 and 85,000,000 feet a day, respectively, and estimated reserves of about 10,000,000,000 feet each. Lesser amounts of dry gas have been developed in the other areas, including Vernon Township, Isabella County, Grant Township, Clare County, and Elba Township, Gratiot County. Some gas is produced and sold from all but the Clare County area.

Officers and directors of the American-Michigan Pipe Line Co. were elected recently at an organization meeting in Chicago. Chestern N. Chubb, vice president of American Light & Traction Co., New York, is president. Other officers are: Vice president, Glenn R. Chamberlain, president of the Grand Rapids Gas Light Co.; secretary-treasurer, G. J. Zorn, secretary of the Muskegon Gas Co.; assistant secretaries and assistant treasurers, E. J. Hammer of Muskegon and James Lawrence of Chicago, and additional directors Oliver S. Hagerman and Harry Munsell, both of Chicago.

The American-Michigan company has a contract with Taggart Brothers, Inc., of Big Rapids, Mich., developers of the Mecosta Field, to start laying the line as soon as Taggart's fifth gasser, now drilling, is completed in the Michigan gas sands with an open flow at least equivalent to their first well, a 4,000,000-foot gasser, and at a depth no greater than in the first well.

The contract provides the pipe line company shall have first call on 14,000,000,000 feet of reserves with 2,000,000,000 reserved for the Mecosta Gas Co. now supplying Big Rapids through an 8-mile line laid last fall.

REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement except as otherwise noted

The following quotations are exclusive of the Federal excise taxes of 1 cent a gallon on gasoline and 4 cents on lubricating oils.

Refinery Gasolines

	Apr. 3		Mar. 27	
OKLAHOMA (Group 3)—				
U. S. Motor grades:				
Below 60 octane	.03¼	.03⅜	.03⅛	.03¼
60-64.9 octane	.04	.04¼	.04	.04¼
65-70 octane	.04¼	.04½	.04¼	.04½
60-62 400 grades:				
Below 60 octane	.03⅜	.03⅝	.03¼	.03⅜
60-64.9 octane	.04⅛	.04½	.04⅛	.04½
65-70 octane	.04½	.04¾	.04½	.04¾
64-66 375	.03⅞	.04	.03⅞	.04
68-70 360	.04¼	.04½	.04⅛	.04½
NORTH TEXAS—				
U. S. Motor grades:				
Below 60 octane	.03¼	.03⅝	.03⅛	.03¼
60-64.9 octane	.04	.04¼	.04	.04¼
65-70 octane	.04¼	.04½	.04¼	.04½
60-62 400	.03⅜	.03⅝	.03¼	.03⅜
64-66 375	.03⅞	.04	.03⅞	.04
68-70 360	.04¼	.04½	.04⅛	.04½
NORTH LOUISIANA (Ark., No. La. & Miss. del.)—				
U. S. Motor grades:				
Below 60 octane	.03¾		.03¾	
60-64.9 octane	.04⅝		.04⅝	
65-70 octane	.05⅛		.05⅛	
60-62 400	.03¾		.03¾	
ARKANSAS (Ark., No. La. & Miss. del.)—				
U. S. Motor grades:				
Below 60 octane	.03¾		.03¾	
60-64.9 octane	.04¾		.04¾	
65-70 octane	.05⅛		.05⅛	
CHICAGO (based on Oklahoma Group 3)—				
U. S. Motor grades:				
Below 60 octane	.03¼	.03⅜	.03⅛	.03⅜
60-64.9 octane	.04⅛	.04¼	.04	.04¼
65-70 octane	.04½	.04¾	.04⅜	.04⅝
60-62 400	.03¼	.03½	.03¼	.03½
64-66 375	.04	.04¼	.04⅛	.04¼
68-70 360	.04¼	.04½	.04⅜	.04½
Aviation fighting grade	.04⅞	.05⅛	.04⅞	.05⅛
PENNSYLVANIA (inland refineries)—				
58-60 U. S. Motor:				
Below 60 octane	.04⅞	.05	.04¾	.05
60-64.9 octane	.06⅛	.06¼	.06⅜	.06½
65-70 octane	.06½	.06⅝	.06¾	.07
64-66 375	.06	.06⅛	.06	.06⅛
68-70 350	.06¼	.06½	.06¼	.06½
CALIFORNIA (domestic movement)—				
54-58 U. S. Motor	.04	.05	.04	.05
58-60 400	.04½	.05½	.04½	.05½
EAST COAST—				
U. S. Motor, below 60 octane:				
New York	.05½	.05¾	.05½	.05¾
Baltimore	.05½	.05¾	.05½	.05¾
U. S. Motor, 60-64 octane:				
New York (Bayonne)	.05¾		.05¾	.06
Philadelphia	.05¾	.06	.05¾	.06
Boston	.06	.0645	.0620	
Baltimore	.05¾		.05¾	.06
Charleston, S. C.	.05¾		.05¾	.06
U. S. Motor, 65 and above:				
New York (Bayonne)	.06		.06	
Philadelphia	.06	.06¼	.06	.06¼
Boston	.06¼	.0670	.0670	
Baltimore	.06	.06¼	.06	.06¼
Charleston, S. C.	.06	.06¼	.06	.06¼
GULF COAST (domestic)—				
U. S. Motor:				
Below 60 octane	.05	.05¼	.05	
60-64.9 octane	.05¼	.05½	.05⅛	.05¼
65 octane and higher	.05½	.05⅝	.05½	

Naphthas

	Apr. 3		Mar. 27	
PENNSYLVANIA (inland refineries)—				
50-52 430-450 (blending)	.04½	.04¾	.04⅜	.04⅝
52-54 430-450 (blending)	.04½	.04¾	.04⅜	.04⅝
54-56 430-450 (blending)	.04½	.04¾	.04⅜	.04⅝
CHICAGO (based on Oklahoma Group 3)—				
50-52 450 (blending)	.03¼	.03½	.03½	.03¾
Cleaners' naphtha, 56-58 gr., 200 i.b.p.-330 e.p.	.06	.06¼	.06	.06½
Lacquer diluent, 180 i.b.p.-250 e.p.	.07	.07½	.07⅛	.07½
Lacquer diluent, 140 i.b.p.-200 e.p.	.08	.08½	.08⅛	.08½
Rubber solvent, 68-70 gr., 100 i.b.p.-300 e.p.	.06	.06¼	.06	.06½
Stoddard solvent, 300 i.b.p.-410 e.p., over 83° flash	.05½	.06	.05⅝	.06
Pet. thinner, 290-300 i.b.p., 415 e.p., over 83° flash	.05⅜	.05⅝	.05⅝	.05¾
V.M.&P. naphtha, 56-58 gr., 190-200 i.b.p.-330 e.p.	.06	.06¼	.06⅛	.06⅜
Petroleum spirits	.05	.05¼	.05⅛	.05⅜

Natural Gasolines

	Apr. 3		Mar. 27	
OKLAHOMA (Group 3)—				
Grade 26-70	.01⅜	.01½	.01⅜	.01½
Grade 18-55	.01⅞	.02	.01⅞	.02
Low vapor pressure grades:				
15 lb. v.p. (max.)	.02	.02¼	.02	.02¼
11 lb. v.p. (max.)	.02¾	.02⅞	.02¾	.02⅞
NORTH TEXAS—				
Grade 26-70	.01¼	.01⅜	.01¼	.01⅜
Grade 18-55	.01¾	.01⅞	.01¾	.01⅞
Low vapor pressure grades:				
15 lb. v.p. (max.)	.01⅞	.02	.01⅞	.02
11 lb. v.p. (max.)	.02⅝	.02¾	.02⅝	.02¾
NORTH LOUISIANA—				
Grade 26-70	.01¾		.01¾	
CALIFORNIA—				
75-78 375	.04½	.05	.04½	.05

Kerosenes

(All kerosenes water white)

	Apr. 3		Mar. 27	
OKLAHOMA (Group 3)—				
41-43	.03¼	.03½	.03¼	.03½
42-44	.03½	.03⅝	.03½	.03⅝
NORTH TEXAS—				
40-41	.03⅛	.03¼	.03⅛	.03¼
41-43	.03¼	.03⅜	.03¼	.03⅜
NORTH LOUISIANA (Ark., No. La. & Miss. del.)—				
41-43	.03¾		.03¾	
42-44	.04		.04	
ARKANSAS (Ark., No. La. & Miss. del.)—				
41-43	.03¾		.03¾	
PENNSYLVANIA (inland refineries)—				
45	.04¾	.05	.04¾	.05
46	.04⅞	.05¼	.04⅞	.05¼
47	.05⅛	.05¼	.05¼	.05½
CHICAGO (based on Oklahoma Group 3)—				
41-43	.03⅜	.03½	.03⅜	.03½
42-44	.03½	.03⅝	.03½	.03⅝
CALIFORNIA (Pacific Coast consumption)—				
38-40 high burning test	.04¼	.04¾	.04¼	.04¾
NEW YORK (Bayonne, N. J.)—				
41-43	.05½	.05¾	.05¾	.06
GULF COAST (domestic)—				
41-43	.04¼	.04½	.04¼	.04½

Petroleum Coke

Prices per ton f.o.b. refineries in Chicago area. (Refineries will absorb freight to 80 cents a ton)

	Apr. 3	Mar. 27
Breeze (screenings)	5.00	5.00
Pile run	5.00	5.00
Direct from still	6.00	6.00
Lump and egg	8.00	8.00

Furnace Oils and Tractor Fuels

(Zero cold test under 190° flash and good odor)

	Apr. 3		Mar. 27	
OKLAHOMA (Group 3)—				
32-36 straw	.02⅝	.02¾	.02⅝	.02¾
36-38 straw	.02⅝	.02¾	.02⅝	.02¾
38-40 straw	.02¾	.02⅞	.02¾	.02⅞
39-41 prime	.02⅞	.03	.02⅞	.03
NORTH TEXAS—				
38-40 straw	.02¾	.03	.02¾	.03
NORTH LOUISIANA (Ark., No. La. & Miss. del.)—				
36-40 furnace oil	.03		.03	
ARKANSAS (Ark., No. La. & Miss. del.)—				
32-36 furnace oil	.02¾	.02⅞	.02¾	.02⅞
CHICAGO (based on Oklahoma Group 3)—				
32-36 straw	.02⅝	.02⅞	.02⅝	.02⅞
38-40 straw	.02¾	.02⅞	.02¾	.02⅞
38-40 prime white	.02⅞	.03	.02⅞	.03
PENNSYLVANIA (inland refineries)—				
40-41 prime white	.04½	.04⅝	.04⅜	.04½
NEW YORK (Bayonne, N. J.)—				
36-40 (No. 1 grade)	.05½	.05¾	.05½	.05¾
32-36 (No. 2 grade)	.04½	.04¾	.04¾	.05
21 industrial (No. 4 grade)	.04	.04¼	.04¼	.04½

Gas Oil, Diesel Oil and Fuel Oil

(Gas oil per gallon; Diesel and fuel oils per barrel)

	Apr. 3		Mar. 27	
OKLAHOMA (Group 3)—				
32-36 gas oil cracking stock	.01⅞	.02⅛	.01⅞	.02⅛
U.G.I. gas oil	.02⅛		.02⅛	
32-36, zero to 15 gas oil	.02⅞	.03	.02⅞	.03
28-30, No. 3 burner oil	1.00	1.05	1.00	1.05
28-30, zero to 10 fuel oil	.95	1.00	.95	1.00
26-30, zero to 10 fuel oil	.85	.95	.85	.95
24-26 fuel oil	.70	.75	.70	.75
20-22 fuel oil	.57½	.65	.57½	.65
Below 16 fuel oil	.55	.60	.55	.60
NORTH TEXAS—				
32-36 gas oil, industrial	.02		.02	
22-26 fuel oil	.57½	.62½	.57½	.62½
Below 20 fuel oil	.47½	.50	.47½	.50
NORTH LOUISIANA (Ark., No. La. & Miss. del.)—				
32-36 gas oil, zero	.03		.03	
14-16 fuel oil	.70		.70	
ARKANSAS (Ark., No. La. & Miss. del.)—				
30-32 gas oil, zero	.02¾		.02¾	
32-36 gas oil	.03		.03	
14-16 fuel oil	.70		.70	
CHICAGO (based on Oklahoma Group 3)—				
32-36 gas oil, industrial	.01⅞	.02	.01⅞	.02
28-30 zero to 10, fuel oil	.95	1.02½	.95	1.02½
26-28 zero to 10, fuel oil	.85	.90	.85	.90
22-26 zero to 10, fuel oil	.75	.80	.75	.80
18-22 zero to 10, fuel oil	.60	.65	.60	.62½
Below 18 fuel oil	.50	.55	.45	.55

Note: Fuel oils of more than 40 cold test generally 5 to 15 cents per barrel less in all these areas.

PENNSYLVANIA (inland refineries)—				
36-40	.03⅞	.04	.03⅞	.04
CALIFORNIA—				
30-34 gas oil per bbl.	.90	1.00	.90	1.00
27 plus Diesel	.90	1.00	.90	1.00
15-19 bunker (at tidewater)	.60	.70	.60	.70
15-19 (cargo lots)	.55	.60	.55	.60
15-19 (tank cars)	.45	.60	.45	.60
GULF COAST—				
28-30 gas oil	.03¼	.03½	.03¼	.03½
28-30 Diesel (bunkers)	1.80		1.80	
Bunker C (bulk cargoes)	.95	1.00	.95	1.00
Bunker C (bunkers)	1.15		1.15	
NEW YORK (Bayonne, N. J.)—				
28 plus, gas oil	.04	.04¼	.04¼	.04½
28-30 Diesel (lighterage 6½ cents per bbl.)	1.95		1.95	
28-30 Diesel (tank cars)	.04½		.04½	
Bunker C (to ocean-going ships in N. Y. harbor)	1.30		1.30	

*Lighterage charge 5 cents per barrel additional.

Neutral Oils

(Vis. at 100° F. except Pennsylvania, and color N.P.A.)

	Apr. 3		Mar. 27	
OKLAHOMA (Group 3)—				
Zero to 10 Cold Test:				
150-3	.08		.08	
180-3	.09¼		.09¼	
180-4	.09		.09	
200-3	.09¾		.09¾	
200-4	.09½		.09½	
240-3	.11¾		.11¾	
240-4	.11½		.11½	
280-3	.12¾		.12¾	
280-4	.12½		.12½	
300-3½	.13½		.13½	
350-3½	.14½		.14½	
400-4	.15½		.15½	
500-4½	.16½		.16½	
100-2 paraffin oil	.05¾		.05¾	
15-30 Cold Test:				
200-3	.08¾		.08¾	
200-4	.08½		.08½	
240-3	.10¾		.10¾	
240-4	.10½		.10½	
280-3	.11¾		.11¾	
280-4	.11½		.11½	
GULF COAST—				
Pale Oils:				
200-3	.07½		.07½	
300-3	.08	.08¼	.08	.08¼
500-3½	.09	.09¼	.09	.09¼
750-3½	.09¾	.10	.09¾	.10
1,200-3½	.10¼	.10½	.10¼	.10½
2,000-4	.10¾		.10¾	
Red Oils:				
200-5-6	.06½		.06½	
300-5-6	.07	.07¼	.07	.07¼
500-5-6	.08	.08¼	.08	.08¼
750	.08¾	.09	.08¾	.09
1,200-5-6	.09¼	.10	.09¼	.10
2,000-6½ plus	.09¾	.10½	.09¾	.10½
CALIFORNIA—				
Pale Oils:				
100-2½-3	.23	.25	.23	.25
200-2½-3	.23	.25	.23	.25
300-3-3½	.23	.25	.23	.25
350-3-4	.23	.25	.23	.25
400-3-4	.23	.25	.25	.25
450-3-4	.23	.25	.23	.25

550-3-4	.23	.25	.23	.25
600-3-4	.23	.25	.23	.25
Red Oils:				
200-4-5	.23	.25	.23	.25
300-5-6	.23	.25	.23	.25
350-5-6	.23	.25	.23	.25
400-5-6	.23	.25	.23	.25
450-5-6	.23	.25	.23	.25
500-5-6	.23	.25	.23	.25
600-5-6½	.23	.25	.23	.25
700-6½ plus	.23	.25	.23	.25
750-6½ plus	.23	.25	.23	.25
900-6½ plus	.23	.25	.23	.25
PENNSYLVANIA—				
150 vis. at 70° F., 3 color; 400-405 flash:				
Zero pour test	.23½	.24	.23½	.24
10 pour test	.22½	.23	.22½	.23
15 pour test	.22	.22½	.22	.22½
25 pour test	.21	.21½	.21	.21½
180 vis. at 70° F., 3 color:				
25 pour test	.25	.25½	.25	.25½
200 vis. at 70° F., 3 color:				
Zero pour test	.30	.30½	.30	.30½
10 pour test	.28½	.29	.28½	.29
15 pour test	.28	.28½	.28	.28½
25 pour test	.27½	.28	.27½	.28

Bright and Steam Refined Stocks

OKLAHOMA (Group 3)—	Apr. 3		Mar. 27	
Bright Stocks:				
190-200 D	.26½		.26½	
150-160 D, 0-10	.23¾		.23¾	
150-160 D, 10-25	.23¼		.23¼	
150-160 25-40	.22¾		.22¾	
150-160 E	.22¾		.22¾	
Steam refined:				
630 light green (treated)	.15		.15	
600 light green (untreated)	.07	.09	.07	.09
600 dark green (untreated)	.05	.07	.05	.07
PENNSYLVANIA—				
600 S.R.	.18½	.19	.18½	.19
650 S.R.	.21	.21½	.21	.21½
600 Pennsylvania flash	.22	.22½	.22	.22½
630 flash	.26½	.27	.26½	.27
600 Warren E filtered	.21½	.22	.21½	.22
Pennsylvania Grade bright stocks:				
No. 8 color, 145-50 at 210; 540-550 flash:				
10 pour test	.29	.29½	.29	.29½
15 pour test	.28½	.29	.28½	.29
20 pour test	.28	.28½	.28	.28½
25 pour test	.27½	.28	.27½	.28

Wax and Petrolatum

(Prices per pound)

	Apr. 3		Mar. 27	
OKLAHOMA (Group 3)—				
124-126 white crude scale	.03¾	.03⅞	.03¾	.03⅞
PENNSYLVANIA—				
122-124	.0405		.0405	
124-126	.04⅛		.04⅛	
NEW YORK HARBOR—				
Wax (a.m.p.) in bags fully refined:				
120-122	.0430	.0455	.0430	.0455
123-125	.04¼	.0470	.04¼	.0470
125-127	.0455	.0480	.0455	.0480
130-132	.0405	.0520	.0405	.0520
133-135	.0555	.0580	.0555	.0580
135-137	.0580	.0605	.0580	.0605
124-126 crude scale	.03¾	.04	.03¾	.04
Petrolatum in barrels in carload lots:				
Dark green	.01⅞	.02	.01⅞	.02
Amber	.02⅞	.03	.02⅞	.03
Extra amber	.03⅛	.03¼	.03⅛	.03¼
Lily white	.06¾	.06⅞	.06¾	.06⅞
Snow white	.07¾	.07⅞	.07¾	.07⅞
Cream	.05⅝	.05¾	.05⅝	.05¾
CHICAGO (f.o.b. switching district)*—				
122-124 wax	.0465	.0475	.0465	.0475
125-127 wax	.0490	.0500	.0490	.0500
127-129 wax	.0505	.0515	.0505	.0515
130-132 wax	.0565	.0575	.0565	.0575
132-134 wax	.0590	.0600	.0590	.0600

*Cents per pound on carlot orders in burlap bags of 225 lbs. approx. Add 3° F. a.m.p.

Export Prices

GASOLINE				
GULF COAST—	Apr. 3		Mar. 27	
U. S. Motor	.04¼	.04⅜	.04½	
60-62 400	.04⅜	.04½	.04⅝	
61-63 390	.04½	.04⅝	.04¾	.04⅞
64-66 375	.04¾	.04⅞	.05	
LOS ANGELES, CALIF.—				
U. S. Motor grades:				
53-55 octane	.04	.04¼	.04	.04¼
55-65 octane	.04¼	.04½	.04¼	.04½
65-67 octane	.04½	.04¾	.04½	.04¾
67-69 octane	.04¾	.05	.04¾	.05
Above 69 octane	.05	.05¼	.05	.05¼
58-60 400 endpoint	.04¾	.05½	.04¾	.05½
KEROSENE				
GULF COAST—				
41-43 prime white	.04⅛	.04¼	.04⅛	.04¼
41-43 water white	.04¼	.04⅜	.04¼	.04⅜
44 water white	.04⅜	.04½	.04⅜	.04½
LOS ANGELES, CALIF.—				
41-43 water white	.04¼	.04½	.04¼	.04½
LUBRICANTS				
NEW YORK (f.a.s. in bbls.)—				
Cylinder Stocks:				
600 Warren E	.28	.29	.28	.29
600 S.R. unfiltered	.26	.26½	.26	.26½
650 S.R. unfiltered	.28	.28½	.28	.28½
600 flash S.R.	.29	.29½	.29	.29½
630 flash S.R.	.33	.33½	.33	.33½
Bright stock, 8 color	.34½	.35½	.34½	.35½
Bright stock, 6½ plus, dil.	.33	.34	.33	.34
NEUTRAL OILS				
200-3 color	.34	.35	.34	.35
150-3 color	.29	.30	.29	.30
PARAFFIN WAX (Fully Refined)				
NEW YORK (prices per pound)—				
120-122 a.m.p.	.04¼	.04½	.04¼	.04½
123-125 a.m.p.	.0420	.0465	.0420	.0465
125-127 a.m.p.	.04½	.04¾	.04½	.04¾
130-132 a.m.p.	.0490	.0515	.0490	.0515
133-135 a.m.p.	.05½	.05¾	.05½	.05¾
135-137 a.m.p.	.05¾	.06	.05¾	.06

Crude Oil Gravity Table

Degrees gravity—	1 Oklahoma and Kansas	2 North Texas, Central Texas and East Central Texas	3 North Louisiana and Arkansas	4 Gray County, Texas	5 Carson, Hutchinson, and Moore Counties, Texas	6 Conroe, Texas	7 Salt Creek, Wyo.	8 Gulf Coast, Texas, and Louisiana	9 Gulf Coast, Texas, and Louisiana	10 Cotton Valley, Louisiana
Below 20	....	....	....	....	....	....	....	$.82	$.82	....
20-20.9	....	....	....	....	....	....	....	.84	.84	....
21-21.9	....	....	....	....	....	....	....	.86	.86	....
22-22.9	....	....	....	....	....	....	....	.88	.88	....
23-23.9	....	....	....	....	....	....	....	.90	.90	....
24-24.9	....	....	....	....	....	....	....	.92	.92	....
Below 25	*$.76	....	....	....	....	....	....	....	....	$.70
25-25.9	*.78	....	....	....	....	....	....	.94	.94	.72
26-26.9	*.80	....	....	....	....	....	....	.96	.96	.74
27-27.9	*.82	....	....	....	....	....	....	.98	.98	.76
28-28.9	*.84	....	....	....	....	....	....	1.00	1.00	.78
Below 25	.84	$.79	$.79	....	....	....	$.84	....	....	....
29-29.9	.86	.81	.81	....	....	....	.86	1.02	1.02	.80
30-30.9	.88	.82	.83	....	....	....	.88	1.04	1.04	.82
31-31.9	.90	.85	.85	....	....	....	.90	1.06	1.05	.84
32-32.9	.92	.87	.87	....	....	....	.92	1.08	1.06	.86
33-33.9	.94	.89	.89	....	....	....	.94	1.10	1.07	.88
34-34.9	.96	.91	.91	....	....	....	.96	1.12	1.08	.90
Below 35	....	....	....	$.79	$.69	....	....	....	....	....
35-35.9	.98	.93	.93	.81	.71	$1.09	.98	1.12	1.09	.92
36-36.9	1.00	.95	.95	.83	.73	1.11	1.00	1.12	1.10	.94
37-37.9	1.02	.97	.97	.85	.75	1.13	1.02	1.12	1.11	.96
38-38.9	1.04	.99	.99	.87	.77	1.15	1.04	1.12	1.12	.98
39-39.9	1.06	1.01	1.01	.89	.79	1.17	1.06	1.12	1.13	1.00
40 and over	1.08	1.03	1.03	.91	.81	1.19	1.08	1.12	1.14	1.02

*The following companies purchasing crude oil in Kansas or Oklahoma, or both, begin their price schedules: Below 25 degrees, 76 cents; 25-25.9 degrees, 78 cents, with 2 cents added for each degree upward to 40 and over at $1.08: Carter Oil Co., Magnolia Petroleum Co., Pure Oil Co., Rock Island Refining Co., Shell Petroleum Corp., Sinclair Prairie Oil Marketing Co., Skelly Oil Co., and Wilcox Oil & Gas Co. All others begin their schedule at below 2° degrees, 84 cents, excepting Philtex Oil Co., which begins with below 31 degrees at 88 cents.

Column 1—Effective September 29, Texas Co. in Oklahoma; Stanolind Crude Oil Purchasing Co. in Kansas and Oklahoma; Anderson & Prichard, Inc., in Oklahoma; Bell Oil & Gas Co. in Oklahoma; Carter Oil Co. in Oklahoma and Kansas; Deep Rock Oil Co. in Oklahoma; Derby Oil Co. in Kansas; Globe Refining Co. in Oklahoma; Golden Rule Refining Co. in Kansas; Gypsy Oil Co. in Oklahoma and Kansas; Kanotex Refining Co. in Kansas; Magnolia Petroleum Co. in Oklahoma; Mid-Continent Petroleum Corp. in Oklahoma; National Refining Co. in Kansas and Oklahoma; Shell Petroleum Corp. in Kansas and Oklahoma; Sinclair Prairie Oil Marketing Co. in Kansas and Oklahoma; Texas Co. in Oklahoma; Tide Water Oil Co. in Oklahoma; Vickers Refining Co. in Kansas; Continental Oil Co. in Kansas and Oklahoma; Empire Pipe Line Co. in Oklahoma and Kansas; Philtex Oil Co. in Kansas and Oklahoma; Pure Oil Co. in Oklahoma; Skelly Oil Co. in Kansas. Effective September 29, by White Eagle Oil Corp. in Kansas; on October 1 by Barnsdall Refineries, Inc., in Oklahoma.

Column 2—Effective September 29, by Texas Co., Stanolind Crude Oil Purchasing Co., Humble Oil & Refining Co., Sinclair Prairie Oil Marketing Co., Gulf Pipe Line Co., Magnolia Petroleum Co., Bell Oil & Gas Co., Continental Oil Co. Effective September 29, in the Van Pool, Van Zandt County, Pure Oil Co. posted below 29 degrees, 84 cents, with 2 cents added for each degree up to 40 and over at $1.08.

Column 3—Effective September 29, by Texas Co., Magnolia Petroleum Co., Gulf Refining Co. Effective December 22, Stanolind Oil & Gas Co. in Pine Island, Louisiana, and Marion County, Texas, posted below 29 degrees, 79 cents, with 2 cents added for each degree up to 40 and over at $1.03. Effective March 17, 1934, by Standard Oil Co. of Louisiana and Louisiana Oil Refining Co. Starting with below 25 degrees, 71 cents, adding 2 cents for each degree upward to 40 and over at $1.03.

Column 4—Effective September 29, by Texas Co., Humble Oil & Refining Co., Magnolia Petroleum Co., Sinclair Prairie Oil Marketing Co., and H. F. Wilcox Oil & Gas Co. On same day Philtex Oil Co. posted below 31 degrees, 71 cents, with 2 cents added for each degree up to 40 and over at 91 cents.

Column 5—Effective September 29, by Texas Co., Humble Oil & Refining Co., Gulf Pipe Line Co., Magnolia Petroleum Co., Wilcox Oil & Gas Co., Continental Oil Co. On same day, Philtex Oil Co. posted below 31 degrees, 61 cents, with 2 cents added for each degree upward to 40 and over at 81 cents.

Column 6—Effective September 29, by Humble Oil & Refining Co. and Tide Water Oil Co., and on September 30, by Texas Co. which on September 29 had posted a schedule of $1.07 to $1.12 with a 1-cent spread on each degree.

Column 7—Effective September 29 by Stanolind Oil & Gas Co.

Column 8—Effective September 29, by Humble Oil & Refining Co., Gulf Pipe Line Co., Shell Petroleum Corp., Pure Oil Co., Sinclair Prairie Oil Marketing Co. On October 2, Magnolia Petroleum Co. posted Lockport, Louisiana: 20-20.9 degrees, 84 cents, with 2 cents added for each degree upward to 34 and over at $1.12, and in Cameron Meadows and Iowa, Louisiana: Below 20 degrees, 72 cents with 2 cents added for each degree up to 34 and over at $1.02. These prices were 2 cents higher on each degree than Magnolia prices posted on September 29. Effective September 29, Shell Petroleum Corp. posted in Iowa, Louisiana, district: Below 20 degrees, 70 cents, with 2 cents added for each degree upward to 34 degrees and over at $1; and in Black Bayou and White Castle, Louisiana: Below 20 degrees, 80 cents, with 2 cents added for each degree upward to 34 degrees and over at $1.10.

Column 9—Effective September 30, Texas Co. (On September 29, Texas Co. had posted a schedule 2 cents lower on each degree, but changed it on September 30.)

Column 10—Effective September 29, by Louisiana Oil Refining Co.

(California Crude Oil Prices on Page 88)

Crude Oil Prices

Oklahoma, Kansas, North Central and East Central Texas

East Texas	$1.00
Stratman, Kans. (Sept. 29, 1933)	1.08
Corsicana (heavy) (June 17, 1933)*	.30
Other fields	(See gravity table)

Note—In East Texas, effective September 29, 1933, by Texas Co., Stanolind Crude Oil Purchasing Co., Humble Oil & Refining Co., Shell Petroleum Corp., Gulf Pipe Line Co., Tide Water Oil Co., Sinclair Prairie Oil Marketing Co., Magnolia Petroleum Co., Sun Oil Co., Panola Pipe Line Co., and Empire Oil & Refining Co.

*Magnolia Petroleum Co.

West Texas

Crane, Upton, Crockett, Howard, Glasscock, Mitchell (Sept. 29, 1933)	$ .70
Ector, Winkler and Pecos Counties and Lea County, New Mexico (Sept. 29, 1933)	.75
Pecos County, Yates shallow pool (Sept. 29, 1933)*	.65
Jones and Fisher Counties.	See gravity table.

Note—Effective September 29, 1933, by Humble Oil & Refining Co., Texas Co., Gulf Pipe Line Co., Shell Petroleum Corp., Magnolia Petroleum Co., and by Stanolind Oil & Gas Co. in Winkler County, Texas.

*Shell Petroleum Corp.

Gulf Coast

Grade A and Grade B specifications discontinued by leading buyers ..... (See gravity table)

Tomball (see note)*	$1.15
Livingston (Sept. 29, 1933)†	1.00
Cleveland (Jan. 11, 1934)	1.00
Greta (Sept. 29, 1933)	.85
Refugio, light	(See gravity table)
Refugio, heavy (Sept. 29, 1933)‡	.85
Markham and High Island	(See Gulf Coast gravity table)
Conroe	(See Conroe gravity table)

Note—Tomball, effective September 29, by Humble Oil & Refining Co., and October 2 by Magnolia Petroleum Co., and November 10 by Stanolind Oil & Gas Co.

*Greta posted by Texas Co. †Shell Petroleum Corp. ‡Refugio heavy, by Humble Oil & Refining Co. Cleveland (Liberty County), posted by Magnolia Petroleum Co.

South Central and Southwest Texas

(See note below table)

Darst Creek	$.87
Mirando	.80
Luling (Sept. 29, 1933)	.75
Pettus	1.05
Salt Flat	.87
Lytton Springs (Sept. 29, 1933)	.95
Duval County (Sept. 29, 1933)	.80
Saxet	.85

Note—Effective on September 29 by Humble Oil & Refining Co., in Darst Creek, Mirando, Pettus, Salt Flat and Saxet. Effective September 29 in Darst Creek by Gulf Pipe Line Co. and Texas Co. Effective October 2 by Magnolia Petroleum Co. Effective in Pettus and Salt Flat on September 29 by Humble Oil & Refining Co. and Gulf Pipe Line Co. Luling and Lytton Springs by Magnolia Petroleum Co. Duval County by Texas Co. Saxet, effective September 29, by Humble Oil & Refining Co. and Texas Co.

(Continued on Page 88)

TANK WAGON MARKETS

Quotations for gasoline and kerosene in United States, as furnished by the larger marketing concerns, include taxes

April 3, 1934

Taxes

The gasoline quotations given in the following tables include the 1 cent Federal tax, as well as state, county and city taxes. The gasoline quoted is the regular or standard grade. In most marketing areas a third grade and a premium grade are also available.

Discounts

Under the standard form of commercial consumer contract which went into effect March 1, 1934, save in California, Oregon, Washington, Arizona and Nevada, a discount of 1 cent a gallon off tank wagon, or 3 cents a gallon off retail prices, is permitted for purchases running between 3,000 and 10,000 gallons a month, and 2 cents a gallon off tank wagon, or 4 cents a gallon off retail prices, for purchases in lots of more than 10,000 gallons a month. The minimum delivery is 25 gallons.

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Denver, Colo. ..	18.0	20.0	6.0	10.0
Pueblo	16.0	18.0	6.0	13.0
Grand Junction	21.5	23.5	6.0	15.0
Casper, Wyo. ..	18.0	20.0	5.0	11.5
Cheyenne	17.0	19.0	5.0	13.0
Butte, Mont. ..	21.0	23.0	5.0	17.5
Billings	22.0	24.0	6.0	16.5
Helena	22.5	24.5	6.0	17.5
Great Falls ..	22.5	24.5	6.0	17.5
Salt Lake, Utah	21.0	23.0	5.0	16.0
Boise, Idaho ..	17.5	19.5	6.0	18.0
Twin Falls ...	21.0	23.0	6.0	18.0
Albu'que, N. M.	19.5	21.5	*7.0	13.0

*One-cent city tax.

Effective March 1, 1934, discount to dealers with or without contract throughout Continental territory: Undivided dealer discount off service station price, 4 cents; divided dealer accounts, 3½ cents.

Standard Oil Co. (Indiana)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Chicago	14.8	16.8	4.0	8.0
Decatur, Ill. ...	16.7	18.7	4.0	10.2
E. St. Louis ..	16.0	18.0	4.0	9.5
Joliet	16.7	18.7	4.0	10.2
Peoria	16.7	16.7	4.0	10.2
Quincy	16.6	18.6	4.0	10.0
Davenport Ia. .	16.6	18.6	4.0	10.1
Des Moines ..	16.6	18.6	4.0	8.0
Mason City ...	16.6	18.6	4.0	10.1
Sioux City ..	16.2	18.2	4.0	9.7
Duluth, Minn. .	17.2	19.2	4.0	10.4
Mankato	16.8	18.8	4.0	9.3
Minneapolis ..	15.4	17.4	4.0	10.4
LaCrosse, Wis..	18.3	20.3	4.8	10.8
Green Bay	17.7	19.7	5.0	10.2
Milwaukee	17.1	17.1	5.0	9.7
Madison	17.4	19.4	5.0	9.9
Detroit, Mich. .	17.0	19.0	4.0	8.5
Grand Rapids .	16.7	18.7	4.0	10.2
Saginaw	17.0	19.0	4.0	10.5
Evansville, Ind.	17.7	19.7	5.0	10.5
Indianapolis ..	17.9	19.9	5.0	10.2
South Bend ...	18.2	20.2	5.0	10.5
Fargo, N. Dak.	17.9	19.9	4.0	13.1
Huron, S. Dak..	18.8	20.8	5.0	11.4
Sioux Falls ...	18.4	20.4	5.0	10.9
K. C., Mo.* ...	15.7	17.7	4.0	8.2
Springfield	15.1	17.1	3.5	9.1
St. Louis	15.0	17.0	3.5	7.5
St. Joseph* ...	15.3	17.3	4.0	8.3
Wichita, Kans.	14.6	16.6	4.0	8.1
Bartlesville, Ok.	16.0	18.5	5.0	8.5

*State tax 2 cents, 1-cent city tax and 1-cent Federal tax.

Discounts to dealers, effective March 1, 1934: Undivided accounts, 4 cents a gallon on Red Crown Ethyl and Standard Red Crown, divided accounts, 3½ cents a gallon on Red Crown Ethyl and Standard Red Crown.

Stanolex Furnace Oil in Chicago

Effective March 5, 1934, prices f.o.b. Chicago, tank wagon prices: No. 1 (36-40 lt. stw. zero), under 100 gallons, 8¾ cents; No. 2 (30-34 stw. zero), 7¾ cents; No. 3 (22-26 zero), 7¼ cents; No. 4 under 300 gallons (12-16 zero), 5¾ cents; viscosity of No. 4, 90-115 at 100° F.; No. 5 under 300 gallons, 5½ cents; for deliveries of 100 gallons or more deduct 1 cent.

Naphtha

	Tank wagon*
Oleum spirits	16.9
V.M.&P. naphtha	18.0
Cleaners' naphtha	18.0
Stanisol	18.0

*Prices include 3-cent Illinois tax, but not 1-cent Federal tax.

Prices f.o.b. Chicago. September 13, 1933. Each of above prices subject to discount of 1 cent per gallon for 150-gallon lots if covered by contracts.

Southern District

STANDARD OIL CO. (KENTUCKY)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Atlanta, Ga. ..	18.0	20.0	7.0	14.5
Augusta	19.5	21.5	7.0	14.0
Macon	19.5	21.5	7.0	14.5
Savannah	19.5	21.5	7.0	14.0
Birm'ham, Ala.	21.5	23.5	8.0	14.0
Mobile	20.5	22.5	8.0	14.0
Montgomery ...	21.0	23.0	8.0	15.0
Jackson, Miss.	18.5	20.5	7.0	14.0
Vicksburg	16.5	18.5	7.0	14.0
Jack'ville, Fla.	19.5	21.5	8.0	11.5
Miami	19.5	21.5	8.0	13.5
Pensacola	19.5	21.5	8.0	13.5
Tampa	19.5	21.5	8.0	12.5
Lexington, Ky.	15.5	17.5	6.0	11.5
Covington	17.5	19.5	6.0	11.5
Louisville	17.5	19.5	6.0	11.5
Paducah	14.5	16.5	6.0	11.0

In addition to the state tax of 4 cents on gasoline, Montgomery has city and county tax of 2 cents on gasoline and one-half cent on kerosene. Kerosene prices in Georgia and Mississippi include 1 cent state tax; in Alabama, an inspection fee of one-half cent on kerosene and one-fortieth cent on gasoline; in Florida an inspection fee of one-eighth cent on kerosene and gasoline. To Pensacola, Mobile and Birmingham state taxes on gasoline add 1 cent city tax.

Southwestern District

MAGNOLIA PETROLEUM CO.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Dallas, Tex. ...	17.0	19.0	5.0	6.0
Fort Worth ...	17.0	19.0	5.0	6.0
Houston	15.0	17.0	5.0	8.5
San Antonio ..	17.0	19.0	5.0	8.5
El Paso	17.5	19.5	5.0	11.0
Muskogee, Ok..	16.0	18.0	5.0	8.5
Okla. City	16.0	18.0	5.0	8.5
Tulsa	16.0	18.0	5.0	8.5
Ft. Smith, Ark.	14.5	16.5	5.0	8.0
Little Rock ...	16.5	18.5	7.5	9.0
Texarkana	15.0	17.0	5.0	8.5

Atlantic Coast District

STANDARD OIL CO. OF NEW JERSEY

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Atl'tic City, N.J.	17.5	16.0	4.0	10.0
Newark	16.8	16.3	4.0	9.5
Annapolis, Md..	18.1	17.6	5.0	10.0
Baltimore	17.6	17.1	5.0	10.0
Cumberland	19.1	18.5	5.0	12.7
Wash'g'n, D. C.	15.8	15.3	3.0	11.5
Danville, Va. ..	20.2	19.7	6.0	12.9
Norfolk	18.7	14.5	6.0	11.3
Petersburg	19.5	19.0	6.0	11.4
Richmond	19.1	15.6	6.0	11.7
Roanoke	20.3	15.4	6.0	12.9
Charls'n, W.Va.	18.5	18.0	5.0	12.6
Parkersburg ...	17.8	17.3	5.0	11.2
Wheeling	18.5	18.0	5.0	12.2
Charlotte, N. C.	21.9	21.0	7.0	13.5
Hickory	22.2	21.0	7.0	13.7
Mt. Airy	22.2	21.7	7.0	13.8
Raleigh	21.7	21.0	7.0	13.3
Salisbury	22.0	21.5	7.0	13.6
Charleston, S.C.	19.7	19.2	7.0	11.3
Columbia	21.5	21.0	7.0	13.2
Spartanburg ...	21.9	21.0	7.0	13.5

Note—Dealer contracts are written at 2½ cents above the posted tank car price, less a voluntary allowance of one-half cent per gallon. This affects all points. Kerosene 1 cent off tank wagon for 25 gallons or more under contract except New Jersey and Baltimore, Md.

Ohio

STANDARD OIL CO. OF OHIO

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Ohio points ...	16.5	17.5	5.0	*12.5

*Includes state tax of 1 cent, effective July 22

Nebraska

STANDARD OIL CO. OF NEBRASKA

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Omaha	17.3	19.3	5.0	9.0
McCook	18.4	18.4	5.0	8.0
Norfolk	17.8	19.8	6.0	8.5
North Platte ..	18.8	20.8	5.0	9.0
Scottsbluff	18.8	19.3	5.0	11.0

Note: Discount to dealers, including any rentals under lease and agency agreements: Undivided accounts, Standard Red Crown and Red Crown Ethyl Gasoline 4 cents, Reliance (third brand) 3 cents, under service station price. Divided accounts, Standard Red Crown Ethyl Gasoline 3½ cents, Reliance (third brand) 2½ cents, under service station price. Discounts to consumers covered only by form CD-1, official commercial consumer contract.

Central South District

STANDARD OIL CO. OF LOUISIANA

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
N. Orleans, La.	19.3	17.5	*7.0	†12.0
Baton Rouge ..	18.7	18.2	6.0	†12.0
Alexandria	19.6	19.1	*7.0	†10.0
Lafayette	19.8	19.3	*7.0	†12.0
Lake Charles ..	19.7	19.2	*7.0	†12.0
Shreveport	17.5	15.5	6.0	†12.0
Knoxville, Tenn.	23.2	22.7	8.0	13.0
Memphis	21.6	21.0	8.0	9.5
Chattanooga ..	23.0	22.5	8.0	11.0
Nashville	22.4	16.5	8.0	11.0
Bristol	23.0	19.0	8.0	14.0

*Includes city tax of 1 cent. †Louisiana kerosene prices include 1-cent state tax.

Commercial consumers for tank wagon delivery pay following amounts over tank car price, basis yearly deliveries:

1,000 to 75,000 gallons	2.5
75,000 to 300,000 gallons	1.5
Over 300,000 gallons	1.0

Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA*

	Gasoline			Kero.
	Tank wagon†	Posted retail	Incl'ds tax of	tank wagon
San Francisco .	12.0	15.0	4.0	12.5
Los Angeles ..	10.0	13.0	4.0	12.5
Fresno, Calif. .	12.0	15.0	4.0	14.0
Phoenix, Ariz. .	18.5	21.5	6.0	‡16.0
Reno, Nev.	20.0	23.0	5.0	15.5
Portland, Ore. .	19.0	22.0	5.0	13.5
Seattle, Wash..	15.0	18.0	6.0	13.5
Tacoma	15.0	18.0	6.0	13.5
Spokane	21.0	24.0	6.0	18.0

*Retail prices posted by Standard Stations, Inc., a subsidiary.

†Prices are at company's plant or depots, as company does not operate stations. A 4-cent per gallon discount is given dealers and customers taking tank wagon lots except in Phoenix where the discount is 1 cent.

‡Includes 5 cents state tax.

Pennsylvania, Delaware and Part of New England

ATLANTIC REFINING CO.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Philadelphia,Pa.	15.5	16.5	4.0	10.0
Pittsburgh	16.1	17.0	4.0	10.0
Allentown	15.5	16.5	4.0	10.0
Erie	15.0	16.0	4.0	10.0
Scranton	16.0	19.0	4.0	10.0
Altoona	16.0	19.0	4.0	10.0
Dover, Del. ...	16.5	17.5	4.0	10.0
Wilmington ...	16.5	17.0	4.0	10.0
Boston, Mass. .	16.0	19.0	4.0	8.5
Springfield	16.6	19.6	4.0	8.5
Worcester	16.5	17.5	4.0	9.0
Hartford, Conn.	15.4	16.4	3.0	9.0
New Haven ...	15.2	16.2	3.0	9.0
Providence, R.I.	14.5	15.5	3.0	8.5

New York and Part of New England

STANDARD OIL CO. OF NEW YORK

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Albany, N. Y. .	16.1	17.1	4.0	9.0
Met. New York.	14.5	15.5	4.0	9.0
Buffalo	16.5	17.5	4.0	8.5
Rochester	16.5	17.5	4.0	8.5
Syracuse	16.5	17.5	4.0	9.0
Boston, Mass. .	15.5	16.5	4.0	8.5
Portland, Me. .	17.2	18.2	5.0	8.5
Manch't'r, N.H.	18.2	19.2	5.0	9.0
Burlington, Vt..	18.8	19.8	5.0	9.5

Canada*

IMPERIAL OIL, LTD.

Imperial 3-Star Gasoline

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Hamilton, Ont.†	26.5	27.5	6.0	17.5
Toronto, Ont.†.	26.5	27.5	6.0	17.5
Brandon, Man.*	31.0	34.5	7.0	22.5
Winnipeg, Man.	28.7	31.7	7.0	20.2
Regina, Sask.	29.0	32.0	6.0	21.5
Saskatoon, Sask.	31.8	34.8	6.0	24.3
Edmonton, Alta.	31.2	34.2	6.0	23.7
Calgary, Alta. .	28.5	31.5	6.0	21.0
Vanc'ver, B.C.†.	30.0	31.0	7.0	24.0
Montreal, Que..	24.0	27.0	6.0	17.0
St. Johns, N. B.	26.5	30.5	7.0	21.0
Halifax, N. S. .	25.5	29.5	6.0	21.0

*Imperial gallon used in Canada. †Dealer discount posted tank wagon on gasoline in Ontario and British Columbia subject to dealer's discount of 3 cents per gallon.

Retail Price Changes

Regular-Grade Gasoline and Kerosene

Standard Oil Co. (Indiana) March 23 reduced service station price of gasoline 2 cents in Milwaukee. March 29, reduced tank wagon and service station prices 1½ cents in metropolitan Chicago and in Minneapolis. Same date, reduced tank wagon price of kerosene 1.7 cents in metropolitan Chicago.

Continental Oil Co. March 28 reduced tank wagon and service station prices of gasoline 1 cent in Utah, Idaho and Wyoming, except Casper, where the reduction was 1½ cents. Same date, tank wagon and service station prices reduced 1 cent in Billings. March 30, tank wagon and service station prices reduced one-half cent in Grand Junction and 1 cent in New Mexico, except in Albuquerque, where the reduction was one-half cent. March 18, tank wagon and service station prices reduced 2 cents in Boise. March 24, tank wagon and service station prices reduced 2 cents in Twin Falls.

Standard Oil Co. (Kentucky) March 15 reduced tank wagon and service station prices of gasoline 1½ cents in Paducah. March 17, reduced tank wagon and service station prices 1½ cents in Vicksburg. March 21, advanced tank wagon and service station prices 2 cents in Montgomery. March 12, advanced tank wagon and service station prices one-half cent in Augusta. March 8, advanced tank wagon price of kerosene 1½ cents in Atlanta and one-half cent in Macon.

Standard Oil Co. of New Jersey March 22 reduced service station price of gasoline one-half cent in Roanoke and advanced service station price 2 cents in Hickory.

Standard Oil Co. of Louisiana March 22 reduced service station price of gasoline one-half cent in New Orleans; March 23, reduced the price one-half cent further. March 23, reduced service station price of gasoline 1.2 cents in Bristol.

Atlantic Refining Co. March 28 reduced tank wagon price of gasoline one-half cent in Philadelphia, reduced tank wagon and service station prices one-half cent in Pittsburgh, reduced tank wagon and service station prices 1 cent in Allentown, reduced tank wagon and service station prices 1½ cents in Erie, reduced tank wagon price one-half cent and advanced service station prices 1½ cents in Scranton and Altoona, advanced service station price 2 cents in Boston and Springfield.

Standard Oil Co. of New York March 26 reduced tank wagon and service station prices of gasoline one-half cent in Boston.

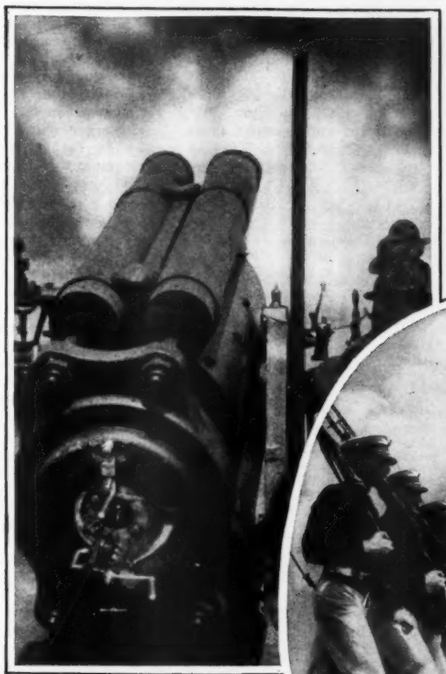
ONTARIO TO LICENSE STATIONS

TORONTO, Ontario, Apr. 2.—In an effort to curb "bootleg" gasoline stations, the Ontario government has introduced the gasoline handling act, which provides for the licensing of all gasoline stations.

The act aims to eliminate stations which sell imported gasoline and fail to turn over the gasoline tax to the government. A comparatively small number of stations start up periodically, usually handling the distress type of gasoline, and after collecting the gasoline tax go out of business without turning the money over to the government.

Discussing the law, Hon. Leopold Macaulay, minister of highways, said: "It is a form of illegitimate competition which should be checked. It is an injustice to those who are playing the game and remitting the tax to the government. The amount of arrears is small, about $30,000, but the government feels that the practice should be stopped. Since 1927 the department of highways has collected $60,000,000 in gasoline taxation. We propose to license gasoline stations, and they won't be allowed to open unless they secure a license. It is not the purpose of the department to obtain revenue by this means."

WEST POINT - ANNAPOLIS USE SINCLAIR OILS

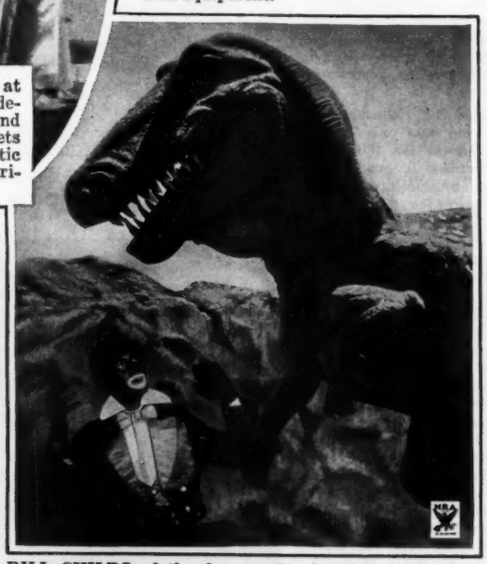


WEST POINTERS practice on 8-inch railroad gun at Fortress Monroe, Va. Trucks, tractors, motor cars and other equipment used at West Point are Sinclair-lubricated. The reputation of Sinclair products makes the Sinclair franchise especially valuable for distributors, jobbers and dealers.

ARMY TANK CORPS puts on a show for West Point cadets on one of their annual tours of military posts. Sinclair supplies oils and greases to the Army in 36 States for tanks and other motorized equipment.

NAVAL CADETS parade at Annapolis. Battleships, destroyers, submarines, and aircraft on which cadets are trained on the Atlantic seaboard are Sinclair-lubricated throughout.

MODEL of old Brontosaurus built by H. H. Ritts, enterprising Sinclair dealer of Kingston, Pa. Sinclair motor oils in Tamper-Proof cans are real sales builders for Sinclair distributors, jobbers and dealers.



BILL CHILDS of the famous Sinclair Minstrels says, "How do, gals" to Tyrannosaurus Rex, one of Sinclair's well-known dinosaurs. The Sinclair dinosaurs will be back at the Chicago World's Fair again this year—making more customers for handlers of Sinclair products.

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NEWS FROM FOREIGN LANDS

U. S. S. R.

Oil operations in the U.S.S.R. in February continued to show a substantial increase over the same period in 1933 with gains over the previous month. In the crude oil end, production in February totaled 1,784,000 metric tons which compares with 1,914,100 tons in January. Considering the difference in number of days in the two months and February production averaged 63,717 tons (446,019 bbls.) daily and in January 61,745 tons daily (432,215 bbls.). The February output represented an increase of 23 per cent over February, 1933, which averaged 58,000 tons (406,000 bbls.) daily.

Two of the trusts—Maineft and Embaneft—were producing in excess of the government's plan established at the start of the year. The Azneft which is the principal producing trust based on the February record is running 84 per cent of the plan.

There was a large gain in drilling operations during February. The 97,427 meters for February was in excess of the January total and represented a 91 per cent increase over the same month in 1933. In the drilling end, U.S.S.R. operations for the first two months of the year have been almost 100 per cent of the government's plan.

In the refining end, there was also a small gain in February over January with a 16 per cent gain over February, 1933. The Azneft was running better than 100 per cent of the plan in run to stills but the average for the entire country was brought down to 87.7 per cent due to the fact that the smaller trusts have not increased their operations as expected. It is expected that the Sredazneft which is to start operating a new plant will increase its percentage in the near future.

Gasoline production in February totaled 195,870 tons and was only slightly greater than the total for February, 1933. Despite its increase in crude runs to stills the Azneft produced only 66,300 bbls. of gasoline which was 76 per cent of the plan. The yield of gasoline was approximately 6 per cent based on the crude runs in contrast to a yield of better than 20 per cent in the case of refined kerosene. The production of kerosene increased 18 per cent over February, 1933.

Representatives of leading banks in New York last week held a meeting with representatives of the American-Russian Chamber of Commerce for the purpose of devising means to aid the operation of the Export-Import Bank recently organized by the Government for the purpose of fostering trading relationships between the United States and Russia. No announcement has been made as to the results of the two conferences that have been held, but it is understood that preliminary plans for the extension of credit to the U.S.S.R. have been completed.

Oil companies play an important part in these negotiations, due to the expressed desire of the U.S.S.R. officials to purchase American oil field and refinery equipment. This equipment is needed to carry out the expansion plans of the U.S.S.R. in oil operations over the next four years. It is also understood that the continuance of purchase of Russian oil products by certain American companies is involved in the negotiations.

The meetings were called by William C. Dickerman, president of the American Locomotive Co. and acting president of the American-Russian Chamber of Commerce. Bankers and industrialists who have attended the meetings include Joseph C. Rovensky, vice president, Chase National Bank; Robert F. Loree, vice president of the Guaranty Trust Co.; B. Hwoschinsky, vice president of the Central Hanover Bank & Trust Co.; Howard J. Rogers, vice president, Bank of Manhattan Co.; Horace C. Flanigan, vice president Manufacturers Trust Co.; Stuart Miller Crocker, vice president, International General Electric Co., Inc.; Alfred H. Swayne, vice president, General Motors Corp.; Alexander Hamilton, manager, American Locomotive Export Corp., and Louis Brown, secretary of the association.

FEBRUARY OIL OPERATIONS IN U.S.S.R.

Crude Oil Production—By Individual Trusts (Data in Metric Tons)

Trust—	February, 1934	Per cent of plan	January, 1934	February, 1933	February per cent relation of 1934 to 1933
Azneft	1,367,800	84 2	1,492,500	888,000	154 0
Grozneft	315,300	75.1	326,800	410,500	76.8
Maineft	57,200	104.0	57,700	41,500	137 8
Embaneft	19,000	111 8	11,000	13,900	136.7
Other trusts	24,800	67 5	26,100	98,600	25.1
Total	1,784,100	82.9	1,914,100	1,452,500	122.8

Drilling Operations—By Individual Trusts (Data in Meters)

Drilling in proven fields	72,743	99.1	72,506	34,612	210.2
Wildcatting in old areas	14,993	103.4	15,894	10,608	141.3
Wildcatting in new areas	9,691	78.9	8,360	5,677	170.7
Total	97,427	97.3	96,760	50,897	191.4

Refinery Operations—By Individual Trusts (Data in Metric Tons)

Crude Oil Runs to Stills

Azneft	1,023,600	101.5	1,121,000	834,900	122 6
Grozneft	475,500	69.5	528,300	450,400	105.6
Oil plants	15,000	62.8	15,050	26,300	57.0
Sredazneft	3,300	42.9	1,950	2,700	122.2
Total	1,517,400	87.7	1,666,300	1,314,300	115.5

Gasoline Production

Azneft	66,300	76.0	83,600	67,800	97 2
Grozneft	126,900	93 7	129,400	120,100	105 7
Oil plants	2,370	107.7	1,930	1,830	129.5
Sredazneft	300	45 5	120	310	96 8
Total	195,870	86.8	215,050	190,000	103.1

Refined Kerosene

Azneft	234,800	....	266,800	186,600	125 8
Grozneft	106,100	....	135,400	99,900	106 2
Other plants	1,000	....	980	2,500	40.0
Sredazneft	470	....	150	270	174 1
Total	342,370	....	403,250	289,270	118 4

ARGENTINA

Reports from London and Buenos Aires during the past week state that negotiations are under way providing for the merger of part of the Argentine government oil operations with those of the Royal Dutch-Shell subsidiaries now operating in that country. The merger, if consummated, will provide for a substantion cash payment to the government with the government to share in the profits of future operations.

The Dutch-Shell subsidiaries, the Standard Oil Co., S.A. Argentina, and the government-owned and operated company, Yacimientos Petroliferos Fiscales (Argentine Government Oilfields) are the three principal operating companies in Argentine. All the companies have crude oil production, refineries and distributing facilities. The government-owned company started expanding its operations several years ago in competition with private interests and expended large sums of money in developing producing properties, building refineries and acquiring marketing facilities. The project has not proved as profitable as expected and this is believed to account for the willingness on the part of the government to merge with a company already well established in Argentina operations with outlets for refinery products. It is understood that any merger will give the government a voice in future operations and protect the company from an early exhaustion of its crude oil supplies.

Recent reports indicated that the present crude oil production of the government company was approximately 15,000 bbls. daily. This production is obtained in the districts of Comodoro, Rivadavia, Plaza Huincul and Salta. The government's refinery located at La Plata has a crude oil capacity of 20,000 to 25,000 bbls. daily and is complete in its operations, including cracking and new units for the manufacture of lubricating oils and wax. The company maintains marketing outlets in most of the principal consuming centers.

The Shell's principal subsidiary in Argentina is "Diadema Argentina" S.A. de Petroleo. This company has a new refinery at Buenos Aires with a rated capacity of 7,500 bbls. daily. The producing subsidiaries of the Shell companies have a daily crude oil production approximately equal to the refinery capacity. The present crude oil production of the Argentina oil fields is approximately 38,000 bbls. daily, which is not sufficient for refinery requirements, and some crude oil is imported from Venezuela and other points.

MOROCCO

Oil in quantity has been struck in French Morocco, according to a Paris report in the London Oil News, which says that on the night of March 7-8 well No. 26 of the Societe Cherifienne des Petroles came in with a rush of oil that rose in a column some 300 feet in height, but almost immediately a short circuit occurred and the well caught fire. The initial rate of output has been estimated at about 250 tons daily (1,750 bbls.).

The well was put down with a rotary outfit and has a total depth of about 1,250 feet. It is located on the Djebel Tselfat Mountain, between Petitjean and Fez. The company responsible for it is a composite venture, in which the French and Morocco governments are interested along with private capital. It was formed in the spring of 1929 by the mining department of the protectorate of Morocco and a Belgian finance company, and it has upon its board representatives of the Compagnie Francaise des Petroles (in which the French government holds shares) and of the French national office for liquid fuels. It took over from the Societe des Recherches and Forages, in liquidation, a certain quantity of drilling material, as well as various prospecting permits granted to that company and other concerns. A large well begun at Sidi-Bou-M'lid was suspended at 657 meters, and a number of smaller wells were drilled in various parts of the Rharb and of Djebel Tselfat. In the last-named area two wells had already given small productions, but No. 26 is the first well of importance and may justly be regarded as the discovery well.

French Rejoice Over Well in Morocco

Alone

TRANSIT

1200 H. P. Gas Engines
STAND ALONE

Men of experience—men who buy and operate gas engines and men who have followed the development of large gas engines throughout their entire lives have acclaimed the TRANSIT 1200 H.P. Gas Engine as the greatest advance in gas engine design in many years and the most efficient, dependable and economical engine ever built for general power purposes or compressing service. Incorporated in its design are such features as a single cam arrangement for operating both air starting, inlet and exhaust valves, and only one mixing valve for each side of the engine. Balanced construction combined with strength and rigidity provides such a smoothness of power impulses that vibration is practically eliminated—simplicity of operation and many other features makes this engine stand alone as the last word in gas engine design.

Write for bulletin 420 for more detailed information.

NATIONAL TRANSIT PUMP AND MACHINE CO.

OIL CITY, PENNSYLVANIA

NEW YORK CHICAGO CLEVELAND PITTSBURGH LOS ANGELES HOUSTON TULSA

Good Producer in South Central Starr County; Disappointment South of Government Wells

SAN ANTONIO, Tex., Apr. 2.—Interest throughout the Southwest Texas area during the past week was turned to Jeffries-Lambeth Drilling Co.'s No. 2 Starr County Land & Cattle Co., in south central Starr County, which came in early in the week for a good producer. This well, located in the wildcat territory of the Jeffries-Lambeth area and 800 feet southeast of the company's No. 1 gasser, drilled 13 feet of oil sand which was topped at 2,505 feet. Casing was cemented at 2,494 feet and after drilling plugs gas was used from the No. 1 gas well to help clean the hole. After an hour and a half of bailing it started flowing by heads and is now estimated good for 125 to 150 bbls. daily. Total depth is 2,518 feet. This well is about 5 miles east of proven production in the Rio Grande City Pool and on the trend running northwest and southeast through the county. Completing this well as an oil producer has added renewed interest to leasing activities along the trend by both major companies and independents.

East of the Cuevitas Pool, northwestern Starr County, Sun Oil Co.'s No. 5-B M. Guerra, in the La Sacatosa grant, was coring below 2,185 feet. This is a very important test, and if completed as a producer will extend the field 1 mile east. Sun's No. 1-D Guerra, in Share 1 of the Sacatosa grant, was abandoned as dry with total depth of 2,929 feet.

Jim Hogg County

In the southwestern part of Jim Hogg County, A. W. Major's No. 1 M. Guerra & Son, in the center of Survey No. 839, is standing after testing salt water at 2,280 feet. It is reported the test will be carried on down to 2,500 feet.

Government Wells

Bridwell Oil Co.'s No. 1 Southerland, 3 miles southeast of the Government Wells Field in Duval County, proved rather disappointing the past week when it failed to make an oil producer. It had sand with a good show of gas and a show of oil from 2,706-14 feet and has been completed for 20,000,000 feet of gas daily with 975 pounds rock pressure. This well attracted the attention of operators in the Southwest Texas area for several weeks but it was just a little high to make an oil producer. It topped the sand at 2,689 feet, or minus 2,012 feet, which is several feet higher than Campbell's No. 1 Hoffman gas well, about a mile southwest. It is now shut in.

A. H. Richardson and others' No. 1 Drummond, about 6 miles northeast of the Eagle Hill Pool, north central part of the county, was drilling below 1,090 feet. Al Buchanan's No. 6 Duval County Ranch, in Section 206, was drilling plugs with total depth of 1,477 feet in the Cole sand.

Nine wells were added to the Government Wells list of completions during the past week. Cox & Hamon's No. 6 State bottomed hole at 2,245 feet and was completed for 600 bbls. daily. Humble Oil & Refining Co.'s No. 19 Paul White bottomed hole at 2,285 feet and made 25 bbls. per hour. McKay & Reed's No. 2 State drilled to a total depth of 2,256 feet and made an average of 1,500 bbls. daily. Magnolia Petroleum Co.'s No. 6 J. T. Johnson drilled to a total depth of 2,327 feet and was completed for 150 bbls. of oil daily, pumping. Magnolia's No. 2 Tankersley was pumping an average of 150 bbls. daily after hole was bottomed at 2,310 feet. Reynosa Oil Co.'s No. 5-B Duval County Ranch, drilled to 2,278 feet and made 150 bbls. daily. Sun Oil Co.'s No. 39 Weiderkehr was completed for 2 bbls. per hour after hole was bottomed at 2,270 feet. Sun's No. 43 Weiderkehr made 2 bbls. per hour at 2,276 feet. Sun's No. 46 Weiderkehr drilled to a total depth of 2,267 feet and was completed for 22 bbls. per hour.

Medina County

Humble Oil & Refining Co.'s No. 1 J. D. Dodson, near the town of Yancey in southern Medina County, topped the Edwards at 2,647 feet and was last reported shut down at 2,672 feet. It had sand showing gas from 1,471-82 feet.

Caldwell County

About 9 miles east of Lockhart in Caldwell County, Adams and Lyles' No. 1 S. G. Cole was drilling below 1,000 feet. Operators have a block of about 2,500 acres in the McMahan area, in the vicinity of which is reported a nice lease play.

San Patricio County

In the Sinton area, San Patricio County, Plymouth Oil Co.'s No. 1 Welder, north of Sinton, one of the most watched wildcats in Southwest Texas, late in the week was drilling at 6,025 feet. Contract depth is 6,500 feet. C. B. Bunte's No. 1 J. D. Holland, 2 miles southwest of Sinton, tested 24 fourbles of salt water with a show of gas from 2,846-74 feet and late in the week was drilling at 3,225 feet. Sand was topped at 2,830 feet. Atkins and O'Neil's No. 1 Welder, west of Angelita, was coring below 4,115 feet.

DeWitt County

Humble Oil & Refining Co.'s No. 1 Kuester, wildcat in DeWitt County, late in the week was drilling at 4,780 feet. It showed 7 thribbles of salt water on a drill stem test from 3,870-84 feet and also tested salt water from 3,765-74 feet and 3,837-39 feet. Leasing is fairly active throughout DeWitt County.

Hidalgo County

Of great importance is the test now being drilled by Union Sulphur Co.'s No. 1 American Rio Grande Land & Irrigation Co., in Hidalgo County, and later on will be one of the most watched wildcats in Southwest Texas. It was drilling below 1,600 feet at last report.

Humble Oil & Refining Co.'s No. 2 Woodward, on a 30-acre tract in the E. Poor Survey, drilled sand with a show of oil from 1,226-28 feet and late in the week was shut down at 1,230 feet. Humble's No. 1 Woodward was junked and abandoned at 1,810 feet. Amerada Petroleum Corp.'s No. 1 Frank Doering, southwestern part of the county, has been completed for 2,000,000 feet of dry gas daily. Total depth is now 6,457 feet after plugging back from 6,507 feet. It was treated with 1,000 gallons of acid and made about a half barrel of oil per hour with 15 bbls. of salt water hourly. It was then plugged back to shut off the water.

Lee County

Pederson and others are moving in material and derrick for No. 1 Turner, a test to be drilled on the big Tanglewood block in western Lee County. This will be a 6,000-foot test or the Edwards lime and is on the Fault Line which is attracting considerable attention. It is 150 feet from east line and 1,860 feet from north line of 65-acre tract in the David Hudson Survey, 14 miles southeast of Rockdale.

Guadalupe County

Leasing is very active along the fault line in Guadalupe County, with both majors and independents taking practically all acreage available. Continental Oil Co. is shooting the Big Wells ranch in the southern part of the county.

McMullen County

C. C. Shumway's No. 4 Shiner, in Section 38 of the Shumway Subdivision, in McMullen County, has passed through both the Government Wells and the Mirando sands without encountering any shows of importance. Late in the week it was shut down at 1,780 feet. Magnolia Petroleum Co.'s No. 1 Kincaid, wildcat just north of the Nueces River in Survey No. 199, was fishing with total depth of 3,145 feet.

Nueces County

In Nueces County, John Camp's No. 2 King, in Section 24 of the R. Garza Survey, failed to get a test the latter part of the week when the seat gave way. It was reaming to take another test late in the week. Total depth is 4,046 feet, which is also the top of sand. It is a little lower than the gasser to the west, which makes this test look fairly good.

Bastrop County

In Bastrop County, Ogden & Reed's No. 1 Mrs. Landspear, in the E. Standifer Survey, has been abandoned as dry with total depth of 1,780 feet. It had dry Serpentine from 1,544-1,770 feet and drilled top of chalk at 1,770 feet.

Bee County

In Bee County, Phillips Petroleum Co.'s No. 1 Morgan, on a 13,930-acre tract in the Eyles Survey, was drilling at 2,780 feet. Howeth & Swiger have spudded No. 1 Scott, located in Block 30 of Howeth & Swiger Subdivision in the Molina Survey.

Zapata County

Zapata County marked up three completions during the week, two of which were gassers, and one dry hole. O. W. Killam's No. 7 Bruni, wildcat test in the J. V. Borrego grant, bottomed hole at 1,835 feet and has been completed for 30,000,000 feet of gas with 700 pounds rock pressure. In the Martinez Pool, W. R. Shankle and William McGinley's No. 2 Manuel Trevino heirs, was completed for 20,000,000 feet with total depth of 1,659 feet. In the Escobas Pool, Edwards' No. 1 Garcia, in Share 3 of the Comitas grant, has been abandoned as dry with total depth of 1,735 feet.

Wildcat Operations in Southwest Texas

Week Ending March 31

Company, well, farm name, section and block—	Remarks:
BANDERA COUNTY	
Palm-Winn Oil Co.'s (P. H. Winkle) No. 1 R. B. Watson, 600 ft. N of center of S line of tract in Sur. No. 71, 2 miles N from Medina City	T.D. 875 ft.; S.D.
Parkford et al's No. 1 Mrs. R. L. Duke, G.H.&S.A. Sur., Sec. 7	Material.
Peerless O. & G. Co.'s No. 1 Garrison Sur. No. 506, 1,500 ft. from N and 2,700 ft. from E lines of Sur. (3 mi. SW of Medina)	Location.
BASTROP COUNTY	
Chas. E. Anderson's (Ca-Tex O. & G. Dev. Co.) No. 1 Pendergrass, 1,343 ft. from NE line, 310 ft. from SE line of 130-ac. tract in Henry Warnell Sur.	T.D. 1,718 ft.; set csg. 1,639 ft.; S.D. 1,815 ft.
Anderson's No. 1 R. M. Trigg, J. Stewart Sur.	T.D. 1,775 ft.; S.D.; top Serp. 1,438 ft.; show oil 1,685-1,703 ft. in Serp.
Hinton et al's No. 1 Glass, 2,000 ft. from NW and 1,300 ft. from SW lines of Ferguson estate 239-ac. tract in Henry Warnell Sur.	Top Edwards 1,907 ft.; T.D. 1,909 ft.; showing sulphur water.
Marts & Bevins' No. 1 Lucy George, George Glasscock Sur., 4,200 ft. from NW line and 10,900 ft. from SW line of survey	T.D. 2,160 ft.; S.D.
Ogden & Reed's No. 1 Mrs. Landspear, E. Standifer Sur.	T.D. 1,780 ft.; dry Serpentine at 1,544-1,770 ft.; top chalk 1,770 ft.; dry and abd.
Three Oil Co.'s No. 1 M. Ingram, H. S. Morgan Sur.	Derrick.
BEE COUNTY	
Caeser Oil Co.'s No. 1 Pulling, F. Lewis Sur., 150 ft. from NW line, 150 ft. from SW line of 35-ac. tract	T.D. 100 ft.; S.D.; set 10-in. csg.
Howeth & Swiger's No. 1 Scott, 1,043 ft. from S line of Blk. 30 of Howeth & Swiger Subd., Molina Sur.	R.U.
Elbert Jeanes' No. 1 G. L. Courtney, 1,600 ft. from E line, 330 ft. from S line of tract, G. A. Kerr Sur., 1½ miles NE of Pettus	Rigging up.
McLain et al's No. 2 Laura Weiss, B.&B. Sur., 660 ft. E of No. 1	Drlg. 100 ft.
Phillips Pet. Co.'s No. 1 Morgan, 4,950 ft. from W. 3,270 ft. from N lines of 13,930-ac. tract, Eyles Sur.	Drlg. 1,610 ft.; 13-in. at 975 ft.
BELL COUNTY	
Gus Winston et al's No. 3 Warrick, 100 ft. N of James Scroggins' No. 1 Warrick, in Elijah Ingram Sur.	Drlg. 2,882 ft.
BEXAR COUNTY	
A. M. Blume's No. 2 Louis Ridder, approximately 2,350 ft. N of R.R., 700 ft. E of W line of J. M. Baerera Sur. No. 58	T.D. 1,030 ft.; W.O.C.
Keiffer et al's No. 1 Ruiz, SE cor. of 32-ac. tract in F. Rowland Sur. No. 48	Drlg. 1,625 ft.; S.D.
Dingman & Russell's No. 1 R. J. Coffey, 1,228 ft. from SE line, 1,086 ft. from SW line of 420-acre tract in Rodriguez Sur.	T.D. 1,400 ft.; S.D. to drill to Edwards.
S. E. Gantt's No. 1 A. B. Stephen, 2,650 ft. from SW line, 740 ft. from SE line of P. W. Hays Sur.	T.D. 450 ft.; shale.
Thos. Gorton's No. 1 Edward Jackel, 600 ft. from N line, 600 ft. from E line of tract in J. Ward Sur.	T.D. 500 ft.; no report.
George L. O'Neill's No. 1 Neimann in Juan Montez Sur. No. 6	T.D. 1,675 ft.; S.D. for orders.
J. W. Johnson's No. 1 Willow Springs, 130 ft. from N and W lines of lease in B. Munoz Sur. No. 151	T.D. 2,021 ft.; P.B. 1,940 ft.; S.D. Made SW and some oil.
Fred A. Perrenot's No. 1 Russell, 750 varas from NE line, 54 varas from NW line of 500-ac. tract in Rodriguez Sur.	T.D. 1,315 ft.; standing.
N. H. Price's No. 1 Barragas, 150 ft. from S and E lines of 60-ac. tract	T.D. 419 ft.; S.D.; to be comp. by H. E. Lewis.
N. S. Powell's No. 1 M. Sanner, 400 ft. from E line, 5,280 ft. from N line of 128-ac. tract in Ruiz Sur. No. 47	Drlg. 610 ft.
C. A. Smith's No. 1 Henry Lamb, 750 ft. from N and E lines of Lamb farm, in de la Garza grant	Drlg. 955 ft.
A. A. Wietzel's No. 1 fee, F. Ricardo Sur.	Drlg. 975 ft. in shale.

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Latest Completion in Long Lake Proves Gasser; Cores in Cayuga Area Test Show Gas Sand

By L. E. BREDBERG

DALLAS, Tex., Apr. 2.—The Long Lake area in southwest Anderson County came through with another gas well this week, making the third dry gasser in the area and the fifth producer, the two other wells producing oil with a large volume of gas. This new addition is Tide Water Oil Co. and Texas Seaboard Oil Co.'s No. 5 Monnig Brothers (Long Lake Plantation) in the Simon Sanches Survey No. 1, northeast of the discovery well. It gauged 35,000,000 feet of gas on open flow. It had been plugged back from total depth of 5,280 to 5,260 feet. No water showed on the test.

Completing this test as only a gasser practically eliminates the pool as an oil producer of any volume. A gasser was drilled west of the discovery, one was drilled to the southeast, another due south made a large volume of gas and the largest quantity of oil yet found. The discovery well is making about 50 bbls. of oil per day on choke, with considerable gas.

The Lone Star Gas Co. has been negotiating with the owners of the gas wells, and officials of the large power plant near Malakoff have also been negotiating for a supply of gas. This plant now operating on lignite is about 35 or 40 miles due north of the Long Lake Pool, and only about 15 miles north of the Cayuga Field in northwest Anderson County. The discovery well in that pool is also making a large volume of gas and the owners may elect to sell a supply of gas from this field, in which there is so far only one producer and three tests drilling.

Cayuga Area

Cores recovered in Tide Water Oil Co. and Texas Seaboard Oil Co.'s No. 1 Wills in the E. Edmondson Survey, nearly a mile northeast of the discovery well in the Cayuga area, northwest Anderson County, showed gas sand from 3,876-3,915 feet.

Same operators' No. 1 Rampy, in the James Wilson Survey, southeast of the discovery, is drilling at 3,155 feet in chalk. It topped the Austin, according to the driller, at 3,150 feet. Elevation is 291 feet. No. 1 Wortham, about midway between the discovery well and No. 1 Wills, is waiting on cement to set after cementing a surface string.

No other tests have been started in the Cayuga area. The gravity of the oil in the discovery well has been steadily increasing. When the well first came in the oil tested only 28.7 degrees, but it is now 31.8 degrees according to the gauger who is running the gravity tests. The Texas Pipe Line Co. is moving the oil.

Heavy rains have made drilling activities rather difficult, but a good road is being extended from the graveled highway and corduroy roads are being laid to the drilling wells. Gas from the discovery well is being used for drilling the three tests now going down.

River Bed Leases

On March 28 the State offered portions of the bed of the Trinity River, west of the Cayuga discovery well, for lease. Bids will be received on April 25. There are approximately 120 acres of the river bed in this area. Bids will carry a minimum of $10 per acre bonus and one-eighth royalty. The two companies holding the large block have the majority of the acreage on both sides of the river, consequently will be the logical companies to purchase the river bed acreage. If other operators purchase it they may string wells up and down the river bed causing offsets on each side of the river. However, the discovery well, about a mile east of the river and the field, may not be extended to the west.

Leon County

Shell Petroleum Corp. and others' No. 1 Lee in the William Cooper Survey, Leon County, running higher structurally than other tests in the area, and higher than the Beggs discovery gasser drilled by the same operators, tested salt water and mud through one-quarter inch choke at top and bottom. Total depth is 5,703 feet. It is now coring but will probably be plugged back to where it picked up 10,000,000 feet of gas and completed as the third gasser in the area. However, this test is supposed to be located on a different structure than the Beggs discovery.

EAST TEXAS

There were two more wildcat locations staked in the East Texas district during the week. H. A. Baker and others made location for No. 2 Dupuis, in the George Hancock Survey, Henderson County, and J. D. Wrather and others made location for No. 1 G. W. Carter in William Daniel Survey, 4 miles northeast of the Van Field, Van Zandt County.

Humble Oil & Refining Co.'s No. 1 H. C. Tucker, in the J. Bell Survey, 3 miles southwest of Friendship, in Van Zandt County, topped the Austin at 3,590 feet, according to the driller, logging the base of the Pecan Gap chalk at 3,155 feet. It is drilling in Austin chalk at 3,650 feet.

W. E. McKinney and others abandoned No. 1 B. T. Davis, north of the Van Field, Van Zandt County, at 1,720 feet after topping the Pecan Gap chalk at 1,700 feet. It is between wells producing in the Van Field and those producing from the Nacatosh sand to the north.

Byrd & Frost and others' No. 1 Alice Scott, in the Joseph Crawford Survey, Anderson County wildcat, is drilling at 4,725 feet in Pecan Gap chalk.

Rector & Webb's No. 1 C. A. Riddlesberger, in the W. F. Mitcham Survey, 10 miles southeast of Malakoff and northeast of the Cayuga Pool, Henderson County, is drilling at 2,175 feet in shale. Elevation is 350 feet.

Daniels Oil & Royalty Co.'s No. 1 P. D. C. Ball, in the Jose Ignacio Auguilera Survey, south of Turlington in Freestone County, is drilling at 3,200 feet in sandy shale. It topped the Pecan Gap chalk at 3,030-3,180 feet, according to the driller.

Distribution Report

Runs by main lines from the field average 447,760 bbls. per day during the week. Runs to local refineries averaged 60,855 bbls. per day, about a 17,000-bbl. daily drop from past weeks, and tank car shipments averaged only 82 per day. This put daily average distribution at 508,697 bbls. with production at 435,460 bbls., showing a daily average over and above reported production of 73,237 bbls. There are now 13 refineries shut down in the field, according to field reports, others shutting down later in the week and therefore not showing up on these reports.

Refined products shipped during the week ending 7 a.m., March 24, were as follows:

	Cars	Gallons
Gasoline	747	6,475,260
Fuel oil	727	6,888,910
Topped crude	427	3,787,770
Naphtha	2	16,420
Distillate	154	1,287,860
Petroleum residuum	11	94,975
Kerosene	65	545,830
Casinghead gasoline	22	178,122
Gas oil	76	659,579

There was an increase of 264 cars of refined products, or 2,830,800 gallons over the previous week. Gasoline shipments increased by 1,833,300 gallons. These shipments are expected to show a decided decrease in the following week due to many plants shutting down as a subterfuge, or shutting down because of closer supervision by the commission's men. Closer inspection of tenders will also have its effect on diminishing shipments of such products.

East Central Texas Wildcats

Week Ending April 2

ANDERSON COUNTY

Company, well, farm name, section and block—	Remarks
Pete Burton et al's No. 1 Freeman Baptist Church, 105 ft. due W of NW cor. of W. Chancellor Sur. in center of a 2-ac. tract, W. T. Meredith Sur.	Location.
Byrd-Frost et al's No. 1 Alice Scott, 2,200 ft. from N and 700 ft. from E lines of Joseph Crawford Sur., 1¼ miles NW of Slocum	Drlg. 4,470 ft.
Standard of Kansas' No. 1 A. W. Johnson, 555 ft. from N line, 420 ft. from E and W lines of 22.8-ac. tract, Simon Sanches Sur.	Derrick.
Tide Water Oil Co. and Texas Seaboard Oil Co.'s No. 1 Annie Wills, 1,400 ft. from W and 3,600 ft. from N lines of the E. Edmondson Sur., 5,400 ft. NE of discovery well	Drlg. 3,160 ft.
Tide Water Oil Co. and Texas Seaboard Oil Co.'s No. 1 L. A. Rampy, 467 ft. from S and W lines of Rampy 103.38-ac. tract, James Wilson Sur.	Waiting on cmt. to set; T.D. 514 ft.
Tide Water Oil Co. and Texas Seaboard Oil Co.'s No. 1 W. C. Wortham, 467 ft. out of most westerly SW cor. of Wortham 100.87-ac. tract	Rig up.
Tide Water Oil Co. and Texas Seaboard Oil Co.'s No. 5 Monnig 2,799 ft. N and 933 ft. E of No. 1, Simon Sanches Sur. No. 1	Plugged back to 5,255 ft.; T.D. 5,280 ft.

CHEROKEE COUNTY

A. R. Lewis et al's No. 1 J. Bradford, 1,600 ft. from W line and 200 ft. from N line of 50-ac. tract, J. Laprelia Sur.	Derrick.
A. F. Richardson's No. 1 P. Wood, 660 ft. from N line, 3,300 ft. from E line of 498-ac. tract, 14 miles E of Jacksonville, on Cherokee-Rusk County line, Ignacis Sanches Sur.	Derrick.

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COMPLETIONS IN EAST TEXAS

North Gregg County

Alco Royalty Co.'s No. 4 R. K. Johnson, top sand 3,608 feet, initial production 90 bbls. per hour through open tubing, total depth 3,624 feet. Arkansas Fuel Oil Co.'s No. 5 Castleberry, top sand 3,639 feet, initial production 41 bbls. in one-half hour through open tubing, total depth 3,658 feet. J. G. Beard's No. 6 W. L. Fuller, location abandoned. Clark & Cowden's No. 6 Christian, top sand 3,619 feet, initial production 120 bbls. per hour through open tubing, total depth 3,669 feet. Empire Gas & Fuel Oil Co.'s No. 5 J. L. Spurrier, top sand 3,534 feet, initial production 27 bbls. in one-quarter hour through open tubing, total depth 3,610 feet. F. H. E. Oil Co.'s No. 8 J. E. Christian, top sand 3,616 feet, initial production 42 bbls. in 28 minutes, total depth 3,658 feet. Gulf Production Co.'s No. 1 Lacy-Snider, top sand 3,485 feet, initial production 84 bbls. per hour through open tubing, total depth 3,515 feet. Lechner & Hubbard's No. 5 McGrede, top sand 3,611 feet, initial production 100 bbls. per hour through open tubing, total depth 3,625 feet.

Magnolia Petroleum Co.'s No. 12 H. L. Foster, top sand 3,578 feet, initial production 100 bbls. per hour through open tubing, total depth 3,600 feet. Rajo Oil Co.'s No. 7 J. C. Barrett, top sand 3,613 feet, initial production 40 bbls. per hour through open tubing, total depth 3,638 feet. Rancho Oil Co.'s No. 3 Mollie Fenn, top sand 3,590 feet, initial production 50 bbls. in one-half hour through open tubing, total depth 3,619 feet. T. S. Schroeder's No. 5 Bumpas, top sand 3,530 feet, initial production 40 bbls. in one-quarter hour through open tubing, total depth 3,600 feet. Simms Oil Co.'s No. 5 A. Christian, top sand 3,551 feet, initial production 40 bbls. in 20 minutes through open tubing, total depth 3,566 feet. Stanolind-Simms Oil companies' No. 8 Albright, top sand 3,548 feet, initial production 41 bbls. in 40 minutes through 1-inch tubing choke, total depth 3,630 feet; No. 2-A Thad Snoddy, top sand 3,528 feet, initial production 21 bbls. in one-quarter hour through open tubing, total depth 3,591 feet. Sun Oil Co.'s No. 8 J. C. McKinley, top sand 3,638 feet, initial production 65 bbls. per hour through open tubing, total depth 3,658 feet; No. 7-B A. Tooke, top sand 3,576 feet, initial production 29 bbls. in one-quarter hour through open tubing, total depth 3,661 feet.

A. W. Tarrant's No. 2 Sabine River, top sand 3,603 feet, initial production 65 bbls. per hour through open tubing, total depth 3,608 feet.

South Gregg County

Atlantic Oil Producing Co.'s No. 10 M. Whaley, top sand 3,640 feet, initial production 45 bbls. per hour through open tubing, total depth 3,649 feet. DeArman and others' No. 1 Register, top sand 3,684 feet, initial production 62 bbls. per hour through open tubing, total depth 3,692 feet. Empire Gas & Fuel Oil Co.'s No. 7 E. L. Walker, top sand 3,500 feet, initial production 80 bbls. per hour through open tubing, total depth 3,574 feet. Gladiator Oil Co.'s No. 7 M. T. Cole, top sand 3,554 feet, initial production 250 bbls. per hour through open tubing, total depth 3,562 feet. Humble

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Wildcat Tests in Borden, Scurry and Runnels; Producer May Link Two Young County Pools

By L. E. BREDBERG
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., Apr. 2.—Only five new wells were started in the West Texas district during the week. One was a wildcat in Borden County, the others being in proven territory in Howard, Ward and Winkler Counties.

In Borden County, Continental Oil Co. has made location for No. 1 Johnson, Section 34, Block 32, Township 4n, T.&P. Survey. This is the first test announced in this county in some time.

A leading campaign in Scurry County going on for several months is about to come to a head by the reported location for a wildcat to be drilled to the Permian lime in the southwestern part of the county. The test is to be drilled by Coffield and Guthrie, Inc., on the Dodson ranch in the NE of Section 177, Block 97, H.&T.C. Survey. Several major companies have taken protection around the test. Magnolia Petroleum Co. is reported to have purchased 1,000 acres out of the block. Other companies holding protection are Humble Oil & Refining Co. and the Shell Petroleum Corp.

Runnels County

In Runnels County a wildcat is reported to be started within 30 days on the McNay land in the northwest part of the county. It is to be drilled by Charles Dutton in the McZunigh Survey. This county has become one of the most active, having six drilling wells and seven other tests to be started up. The next test to reach the producing horizon in the McMillan Pool is Golden Petroleum Co.'s No. 3 McMillan, scheduled to run casing around 2,470 feet, just above where pay is expected.

Crane County

C. C. Duffey and others' No. 1 G. L. Brown, a wildcat in Section 34, Block 43, Township 4s, T.&P. Survey, Crane County, so far has proved disappointing and little hope is held for it making a producer. In drilling to 3,905 feet it had not encountered any lime, and is checking between 700 and 800 feet lower than the Gulf-Waddell area to the west. In the same county, Gulf Production Co.'s No. 1-D Edwards, Section 21, Block B-18, P.S.L. Survey, about 4 miles northwest of the Sand Hills area, has not shown anything interesting in drilling to 4,472 feet.

Ordovician Tests

Derrick has been completed for John I. Moore and others' No. 1 J. S. McDowell, which is to be an Ordovician test in Glasscock County, expected to spud this week. It is in Section 22, Block 34, Township 2s, T.&P. Survey.

No change has been registered outside of the usual progress in the two Ordovician tests in Pecos anl Upton Counties. In Upton County, Gulf Producing Co.'s No. 103 McElroy is drilling below 9,503 feet and has not been credited with reaching the Ordovician. It is in Section 197, Block F, C.C.S.D.&R.G.N.G. Survey. Humble Oil & Refining Co.'s No. 1 White and Baker, in Pecos County, is bottomed at 8,668 feet and is preparing to make a drill stem test. No indication of oil has been found, but the operators desire more information on the last 150 feet of hole drilled.

Ector County

In the Addis area, Ector County, Humble Oil & Refining Co.'s No. 1 Thomas Martin, in Section 38, Block 43, T.&P. Survey, flowed 60 bbls. of oil and 1 bbl. of salt water from a total depth of 4,318 feet. The production has been pinched so the operators might locate the source of the salt water. Skelly Oil Co.'s No. 1 Addis, in Section 35, Block 43, Township 2s, T.&P. Survey, is getting ready to acidize after plugging back from 4,375 feet to 4,355 feet. It had been flowing 36 bbls. of oil per day through tubing since plugging back. Stanolind Oil & Gas Co.'s No. 5 J. M. Cowden, in the Cowden area in Section 34, Block 43, Township 1n, T.&P. Survey, is scheduled for completion this week. It is drilling below 4,300 feet in gray lime after topping the pay at 4,134 feet. On a 24-hour gauge ending at 7 a.m. Monday it flowed 148 bbls. It will probably be shot to increase its production before being completed. Good results from shooting were registered in the company's No. 4 Cowden, completed last week. On a proration gauge the well flowed 551 bbls. in 24 hours.

In the same county, but in the Holt area, north of the Cowden producers, Landreth Production Co.'s No. 2 Holt appears to be the next well to be completed in this area. First oil was encountered at 4,208 feet and in drilling to 4,236 feet the hole had filled 200 feet with oil. It is in Section 20, Block A, P.S.L. Survey.

Ward County

Two good wells were registered in Ward County during the week when the Atlantic Oil & Producing Co. completed its No. 10 and 12 W. D. Johnson. Both wells are in Section 9, Block 34, H.&T.C. Survey. No. 10 topped the pay at 2,460 feet and registered increases at 2,490-2,530 feet and was completed for an initial production of 600 bbls. daily. Total depth is 2,530 feet. No. 12 Johnson topped the pay at 2,463 feet and was completed for an initial production 239 bbls. per day flowing through tubing and bottomed at 2,504 feet. Location for the company's No. 16 W. D. Johnson was made in Section 9, Block 34, H.&T.C. Survey. The company has two other tests drilling in this immediate area.

Winkler County

In the Scarborough Pool, Winkler County, Sinclair Prairie Oil Co. has made location for No. 2-C State-Scarborough, in Section 1, Block 77, P.S.L. Survey. This pool registered two completions during the week. Harry Adams and others' No. 2 Scarborough, in Section 1, Block 77, P.S.L. Survey, was completed for an initial production of 230 bbls. the first 20 hours flowing through open casing, and was bottomed at 3,030 feet. Sid Richardson and others' No. 2 State-Skelly-Scarborough, was completed for an initial production of 287 bbls. in 24 hours after it was shot with 180 quarts from 2,925-3,304 feet. Total depth is 3,034 feet. It is in Section 1, Block 77, P.S.L. Survey.

Testing of C. P. Campbell's No. 3 Herndon, a wildcat in Section 3, Block 6, M.E.P.&P. Survey, is under way and it should be known the latter part of the week whether it will open another pool. Testing was started with 1,800 feet of oil in the hole. It is 3 miles south of Anson in Jones County.

Fisher County

In Fisher County, Texas Inland Oil Co.'s No. 1 First National Bank of Hamlin was swabbed and the hole refilled with 1,200 feet of oil in one hour. Pay was topped from 3,104-07 feet and it looks as if it will make a quarter-mile northerly extension to the Royston Pool. It is in Section 191, Block 1, B.B.B.&C. Survey.

Eppenauer Drilling Co. has taken a block of 4,000 acres centering in around Section 6, Block CG, Crockett County, location yet to be announced.

In Pecos County, Humble Oil & Refining Co. purchased four sections in Block 144, T.&St.L. Survey, four sections in Block 180, and four sections in Block 100, E.L.&R.R. Survey.

WICHITA FALLS DISTRICT

Pitzer & West's No. 1 W. W. Hoggard, in Block 470, T.E.&L. Survey, about 2½ miles southeast of the deep producing James Pool and about the same distance northwest of Christie Brothers' No. 1 Jeffery, in the P. Vivian Survey, Young County, completed about 10 days ago for a good deep well, picked up saturated lime this week at 3,900 feet and looks sure for a producer that may connect the two areas, making one of the largest pools in the area if other producers are drilled on intervening acreage. Acid treating proves of considerable value in producing wells in this area.

Twenty-five blocks have been taken southwest of Electra on the Wichita-Wilbarger County line, all on the basis of 2,000-foot tests to test the 1,800-foot lime in which production is found in this area. This area has had but little activity during the past three years, but due to the desire for more oil, a better price, and the success of acid treatment of lime wells, the Waggoner pasture is again the scene of much drilling.

There are nearly 170 tests going down in the district with Archer and Young Counties leading. Acid treatment has assumed major importance and another acid treating company has been formed at Breckenridge to compete in this work. This company is known as Acid Service. Organizers are L. M. Pardee and B. F. Fleetwood, and R. G. Miller is agent. This is the fourth acid treating company to enter the district.

There were 41 locations staked this week and 25 tests completed. The majority of the locations were in Archer and Young Counties.

Production in the district averaged 57,615 bbls. per day for the week, a drop of only 100 bbls. per day under the previous week.

Joe Darnell and others are drilling a wildcat 1 mile south of Paradise in Wise County. The test is on the Peek lands in the J. W. Haynes Survey. It is now down below 1,100 feet.

PANHANDLE DISTRICT

Phillips Petroleum Co. has staked a tentative location on the J. C. Wilson ranch in Section 157, Block T-3, T.&N. O. Survey, Moore County, for an 8,500-foot test to go below the regular dolomite and granite wash formations. The company has a large block surrounding this location which is near a gasser drilled in 1929, proving the block for dry gas production. This will be the second deep test in the district, Humble Oil & Refining Co. now drilling a deep test on a block in Block 9, H.&G.N. Survey, in Section 27, on the Smith lands. The showing made in the deep test now being completed near Binger, Okla., may lead to further deep exploitation in the Panhandle, which is on an east-west trend.

R. Watchorn and others' No. 1 D. E. Johnson-Gulf Production Co. test, in Section 47, Block 24, H.&G.N. Survey, nearly 1 mile west of the nearest oil production in western Wheeler County, is extending that area. It made a 60-bbl. head in one hour after swabbing 80 bbls. on a two-hour test. The dolomite pay was topped at 2,430 feet and the test shut down at 2,449 feet.

C. C. Christie has staked a wildcat lo-

Wildcat Operations in West Texas

Week Ending April 2

ANDREWS COUNTY

Company, well, farm name, section and block—	Remarks:
Fuhrman Pet. Co.'s No. 1-B Bonner, 1,320 ft. from N line and 1,320 ft. from E line of Sec. 35, Blk. A-43, P.S.L. Sur.	Drlg. 3,360 ft.
Humble Oil & Ref. Co.'s No. 1 R. M. Means, 660 ft. from N and 660 ft. from E of Sec. 3, Blk. 3-35, P.S.L. Sur.	Standardizing; T.D. 1,870 ft.
Humble Oil & Ref. Co.'s No. 1 Kuykendall, 1,980 ft. from S and E lines of Sec. 24, Blk. A-46, P.S.L. Sur.	Drlg. 1,060 ft.
Llano Oil Co.'s No. 1 J. E. Parker, 330 ft. from N line, 990 ft. from E line of Sec. 18, Blk. A-44, P.S.L. Sur.	Location.

BORDEN COUNTY

Continental Oil Co.'s No. 1 Johnson, 660 ft. from S line and 660 ft. from E line of Sec. 34, Blk. 32, Twp. 4n, T.&P. Sur.	Location.

BREWSTER COUNTY

C. P. Link and Joiner's No. 1 McIntire, 853 ft. from S, 3,390 ft. from E of Sec. 31, Blk. 253, W. M. Mitchell Sur.	S.D. 1,417 ft.

COKE COUNTY

Wm. Hooper's No. 1 Gaston, 240 ft. from S line and 654 ft. from W line of Joseph Sur. No. 11	S.D. 1,365 ft.

CRANE COUNTY

Gulf Prod. Co.'s No. 1 Edwards, 330 ft. from S line and 330 ft. from E line of Sec. 21, Blk. B-18, Public School Land Sur.	Drlg. 4,430 ft.
Storey, Frievelo & Duffy's No. 1 G. L. Brown et al, 330 ft. from N and E line of Sec. 34, Blk. 43, Twp. 4s, T.&P. Sur.	Drlg. 3,500 ft.
Wahlenmaier Petroleum Corp.'s No. 1 W. P. Edwards, 330 ft. from N and 330 ft. from E of SW cor. of the NE of Sec. 12, Blk. B-23, P.S.L. Sur.	Drlg. 300 ft.

CROCKETT COUNTY

Porter Rankin's No. 1 Todd, 1,500 ft. from N line and 3,020 ft. from E line of Sec. 68, Blk. UV, G.C.&S.F. Sur.	Drlg. 998 ft.
J. D. Young's No. 1 Shannon, 330 ft. from W line, 330 ft. from N line of Sec. 35, Blk. 1, G.C.&S.F. Sur.	S.D. 2,635 ft.

CULBERSON COUNTY

Miller Bros.' No. 1 fee, 1,900 ft. from N and 660 ft. from E line of Sec. 21, Blk. 97, P.S.L. Sur.	S.D. 1,065 ft.

DAWSON COUNTY

Ray Albaugh et al's No. 1 John Robinson, 1,320 ft. from N line, 1,320 ft. from W line of Sec. 46, Blk. M, E.L.R.R. Sur.	Drlg. 1,710 ft.

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cation in Section 87, Block 45, H.&T.C. Survey, Knox County, the first test in this county in a long time. There were six other locations staked during the week, two in producing areas of Gray County and three in Wheeler County.

Production in the district averaged 57,845 bbls. per day during the week, a decline of 1,413 bbls. per day under the past week.

Carson County

Skelly Oil Co.'s No. 26 Schafer, pay 3,075-3,100 feet, initial production 90 bbls., total depth 3,135 feet.

Gray County

Cantone Oil Co.'s No. 2 Morse, pay 2,550-2,618 feet, initial production 125 bbls. on pump, shot 300 quarts 2,527-2,618 feet, total depth 2,619 feet. Hoffman Oil Co.'s 3 Finley, shot 240 quarts 3,025-60 feet, initial production 280 bbls., total depth 3,060 feet. Skelly Oil Co.'s No. 5-A Webb, pay 2,445-50 feet, shot 140 quarts 2,351-2,408 feet, initial production 225 bbls. on pump, total depth 2,450 feet. Continental Oil Co.'s No. 5 Wright, pay 2,725-30 feet and 2,820-25 feet, initial production 325 bbls. of oil and 250 bbls. of water, total depth 2,825 feet. Magnolia Petroleum Co.'s No. 1 Reynolds, pay 3,136-59 feet and 3,175-80 feet, initial production 60 bbls. pumping, total depth 3,255 feet.

Hutchinson County

Phillips Petroleum Co.'s No. 2 Johnson, pay 3,034-47 feet, initial production 885 bbls., total depth 3,047 feet. D. Rubin and others' No. 3 fee, shot 200 quarts 2,695-2,805 feet, initial production 30,000,000 feet of gas, total depth 2,809 feet. D. Rubin and others' No. 4 fee, shot 120 quarts 2,650-2,758 feet, initial production 45,000,000 feet of gas, total depth 2,758 feet. Stanolind Oil & Gas Co.'s No. 5-B Ware, pay 3,005-3,110 feet, shot 250 quarts 3,005-3,100 feet, initial production 255 bbls., total depth 3,120 feet.

Moore County

Dogie Oil Co.'s No. 1 Greenwald, junked and abandoned, total depth 2,500 feet.

Wheeler County

Humble Oil & Refining Co.'s No. 1 Koons, pay 2,318-28 feet, initial production 150 bbls., total depth 2,328 feet.

COMPLETIONS IN NORTH TEXAS

Archer County

Baldwin and Sultan's No. 1 Jones, dry and abandoned, total depth 1,205 feet. Bridwell Oil Co.'s No. 4-E Falls County School Lands, lime 1,099-1,114 feet, initial production 80 bbls., total depth 1,114 feet, treated with acid. Continental Oil Co.'s No. 7-D Falls County School Lands, lime 1,086-1,101 feet, initial production 205 bbls. in five hours, total depth 1,101 feet, treated with acid; No. 7-E Falls County School Lands, lime 1,096-1,109 feet, initial production 71 bbls. in eight hours, total depth 1,109 feet, treated with acid. Continental Oil Co. and Cullum's No. 12 Falls County School Lands, lime 1,110-14 feet, initial production 116 bbls., total depth 1,114 feet, treated with acid. Cullum and Alexander's No. 10 Falls-Gulf, lime 1,099-1,118 feet, initial production 85 bbls. per hour, total depth 1,118 feet, treated with acid. Fain & McGaha's No. 20 Logan, lime 1,134-43 feet, initial production 100 bbls., total depth 1,149 feet, treated with acid. C. B. Long's No. 7 Logan, lime 1,151-62 feet, initial production 200 bbls., total depth 1,162 feet, treated with acid.

Palmer-Burch's No. 1 Sadan, dry and abandoned, total depth 1,464 feet. Perkins and Cullum's No. 4-A Falls County School Lands, lime 1,097-1,106 feet, initial production 45 bbls., total depth 1,106 feet, treated with acid; No. 14 Falls-Titken, lime 1,099-1,115 feet, initial production 100 bbls., total depth 1,115 feet, treated with acid; No. 13 Hanzen, lime 1,091-1,107 feet, initial production 275 bbls., total depth 1,107 feet, treated with acid. C. W. Snoddy's No. 1 Ball, dry and abandoned, total depth 755 feet. Texas Plains Oil Co.'s No. 1 Turberville, dry and abandoned, total depth 1,530 feet. United Producers Co.'s No. 2 Logan, lime 1,188-96 feet, initial production 10 bbls., total depth 1,196 feet, treated with acid.

Jack County

Cable Oil Co.'s No. 1 Christian, dry and abandoned, total depth 688 feet. E. S. McLaughlin's No. 1 Ganett, dry and abandoned, total depth 835 feet.

Wichita County

Golding and Cochran's No. 1-D Waggoner, dry and abandoned, total depth 1,918 feet.

Wilbarger County

Luther Webb's No. 1-D Waggoner, oil sand 2,360-68 feet, initial production 65 bbls., total depth 2,368 feet.

Young County

C. E. Beaver's No. 4 Montgomery, oil sand 714-30 feet, initial production 10 bbls., total depth 740 feet. Christie Brothers' No. 1 Jeffery, lime 3,878-97 feet, initial production 200 bbls. of oil and 100 bbls. of water, total depth 3,897 feet. D. Cooke's No. 1 Bullock, abandoned location. C. J. Kleiner's No. 13 Belknap Coal Co., dry and abandoned, total depth 726 feet. J. H. Kleiner's No. 1 Kirkwood, oil sand 696-708 feet, initial production 15 bbls., total depth 727 feet. Mook-Texas Oil Co.'s No. 1 Manning, dry and abandoned, total depth 4,023 feet. T. P. Palmer's No. 2 Stewart, abandoned location. Sedbury and others' No. 1 Jones, temporarily abandoned.

COMPLETIONS IN WEST TEXAS

Howard County

Joe Rush's No. 2 Dodge, total depth 2,860 feet, plugged back to 2,790 feet, initial production 20 bbls. per day on pump.

Ward County

Atlantic Oil Producing Co.'s No. 10 W. D. Johnson, top pay 2,460 feet, increase at 2,490-2,533 feet, initial production 600 bbls. per day flowing through tubing, total depth 2,530 feet; No. 12 W. D. Johnson, top pay 2,463 feet, initial production 239 bbls. per day flowing through tubing, total depth 2,504 feet. Barnsdall Oil Co.'s No. 3 Henry, gas pay 2,068-76 feet, initial production 31,000,000 feet of gas, total depth 2,076 feet. A. Bradford's No. 1 Beatty, temporarily abandoned, total depth 1,060 feet.

Loving County

Eppenauer Drilling Co.'s No. 2-A Allen, top pay 4,275 feet, initial production 166 bbls. per day flowing, total depth 4,310 feet.

Winkler County

Harry Adams and others' No. 2 Scarborough, top pay 2,973 feet, initial production 230 bbls. first 20 hours flowing through open casing, total depth 3,030 feet. Sid Richardson's No. 2 State-Skelly-Scarborough, top pay 2,912 feet, shot 180 quarts 2,925-3,034 feet, initial production 287 bbls. in 24 hours, total depth 3,034 feet.

Ector County

Stanolind Oil & Gas Co.'s No. 4 J. M. Cowden, top pay 4,125 feet, initial production 550 bbls. per day, total depth 4,321 feet.

East Texas Fields

(Continued from Page 41)

Oil & Refining Co.'s No. 46-B S. S. Laird, top sand 3,550 feet, initial production 70 bbls. per hour through open tubing, total depth 3,623 feet. Johnson and Owens' No. 4-B M. T. Cole, top sand 3,508 feet, initial production 60 bbls. in one-half hour through open tubing, total depth 3,525 feet. Shell Petroleum Corp.'s No. 6 H. T. Neal, top sand 3,537 feet, initial production 25 bbls. in one-quarter hour through open tubing, total depth 3,599 feet. Sinclair Prairie Oil Co.'s No. 34-A A. A. King, top sand 3,465 feet, initial production 30 bbls. in one-quarter hour through open tubing, total depth 3,500 feet; No. 35-A A. A. King, top sand 3,490 feet, initial production 35 bbls. in one-quarter hour through open tubing, total depth 3,510 feet. Sun Oil Co.'s No. 14-A J. Marton, top sand 3,418 feet, initial production 46 bbls. per hour through open tubing, total depth 3,430 feet.

North Rusk County

Devonian Oil Co.'s No. 34 R. A. Motley, top sand 3,665 feet, initial production 115 bbls. per hour through open tubing, total depth 3,681 feet. Friedman & Swindler's No. 5 Mayfield, top sand 3,716 feet, initial production 40 bbls., total depth 3,715 feet. Gulf Production Co.'s No. 8 M. A. Peterson, top sand 3,620 feet, initial production 78 bbls. per hour through open tubing, total depth 3,648 feet. R. C. Lipscomb's No. 3 A. A. King, top sand 3,709 feet, initial production 65 bbls. per hour through open tubing, total depth 3,711 feet. Magnolia Petroleum Co.'s No. 12 J. C. Bradbury, top sand 3,684 feet, initial production 39 bbls. in one-quarter hour through open tubing, total depth 3,696 feet. Oil Producers, Inc.'s No. 3 J. C. Bradbury, top sand 3,676 feet, initial production 100 bbls. in 45 minutes through open tubing, total depth 3,695 feet.

South Rusk County

Gant-Garvin and Wegner's No. 1 J. W. Harris, top sand 3,600 feet, initial production 30 bbls., total depth 3,650 feet. Haynes Drilling Co.'s No. 8 M. Lee, top sand 3,616 feet, initial production 80 bbls. per hour through open tubing, total depth 3,646 feet. Houghton's (receiver) No. 3 W. E. Wiley, top sand 3,575 feet, initial production 40 bbls. per hour through open tubing, total depth 3,690 feet. Humble Oil & Refining Co.'s No. 9 J. E. B. Sneed, top sand 3,727 feet, initial production 61 bbls. per hour through open tubing, total depth 3,754 feet; No. 15 J. E. Wheelis, top sand 3,749 feet, initial production 95 bbls. per hour through open tubing, total depth 3,759 feet; No. 9 J. Wooley, top sand 3,688 feet, initial production 65 bbls. per hour through open tubing, total depth 3,774 feet. Jackson-Wise and Snowden's No. 6 J. Wilson, top sand 3,618 feet, initial production 68 bbls. in 20 minutes through open tubing, total depth 3,648 feet.

T. A. Johnson's No. 2 R. E. L. Silvey, top sand 3,807 feet, initial production 60 bbls. per hour through open tubing, total depth 3,809 feet. Lucey Petroleum Co.'s No. 4 Roe Maxwell, top sand 3,684 feet, initial production 50 bbls. in 1 hour and 30 minutes through open tubing, total depth 3,730 feet. McMurray and others' No. 2 Ras Redwine, top sand 3,539 feet, initial production 160 bbls. in 24 hours swabbing, total depth 3,633 feet. Mid-Kansas Oil & Gas Co.'s No. 12 J. F. Mason, top sand 3,640 feet, initial production 84 bbls. per hour through open tubing, total depth 3,679 feet. G. B. Ray's No. 6 L. J. Pinkston, top sand 3,601 feet, initial production 90 bbls. per hour through open tubing, total depth 3,638 feet. J. W. Robins' No. 6 C. W. Mullins, top sand 3,754 feet, initial production 90 bbls. per hour through open tubing, total depth 3,774 feet.

Sinclair Prairie Oil Co.'s No. 50 Kinney, top sand 3,635 feet, initial production 29 bbls. in one-quarter hour through open tubing, total depth 3,650 feet; No. 53 Kinney, top sand 3,667 feet, initial production 25 bbls. in one-quarter hour through open tubing, total depth 3,682 feet; No. 54 Kinney, top sand 3,681 feet, initial production 35 bbls. in one-quarter hour through open tubing, total depth 3,695 feet; No. 56 Kinney, top sand 3,652 feet, initial production 25 bbls. in one-quarter hour through open tubing, total depth 3,666 feet. J. H. Stewart's No. 1 fee, top sand 3,820 feet, initial production 40 bbls. in one-half hour through open tubing, total depth 3,822 feet. Tex-Jersey Oil Co.'s No. 1 I. W. Wooley, top sand 3,539 feet, initial pro-

Crew That Brought In Cayuga Well

Men who drilled the Tide Water Oil Co. and Texas Seaboard Oil Co.'s discovery well in the Cayuga area of northwest Anderson County, Texas. J. B. Hood, driller; R. J. Henley, J. O. Jones, S. P. Fulton and W. L. Hood

duction 18 bbls. in 40 minutes swabbing, total depth 3,580 feet.

Smith County

Stanley-Lewis' No. 4 S. S. Cook, top sand 3,775 feet, initial production 100 bbls. per hour through open tubing, total depth 3,781 feet. Magnolia Petroleum Co.'s No. 1 Roy Loosier, top sand 3,663 feet, initial production 15 bbls. in one-quarter hour through open tubing, total depth 3,666 feet. Sun Oil Co.'s No. 6-A J. J. Denton, top sand 3,724 feet, initial production 6 bbls. through ope-quarter inch choke, total depth 3,728 feet. Weaver-Perry Oil Corp.'s No. 5 T. O. Wright, top sand 3,698 feet, initial production 100 bbls., total depth 3,705 feet.

Upshur County

Galvez Oil Co.'s No. 7 W. W. Holland, top sand 3,585 feet, initial production 90 bbls. per hour through open tubing, total depth 3,597 feet. Humble Oil & Refining Co.'s No. 9-B J. T. Miller, top sand 3,693 feet, initial production 11 bbls. in one-quarter hour through open tubing, total depth 3,706 feet. C. H. Lyons' No. 1 R. R. Cooke, top sand 3,620 feet, initial production 45 bbls. per hour through open tubing, total depth 3,625 feet. Magnolia Petroleum Co.'s No. 3 F. Bland, top sand 3,710 feet, initial production 80 bbls. per hour through open tubing, total depth 3,743 feet; No. 20 J. W. Free, top sand 3,685 feet, initial production 90 bbls. per hour through open tubing, total depth 3,689 feet. Mudge Oil Co.'s No. 4 Bland, top sand 3,720 feet, initial production 90 bbls. per hour through open tubing, total depth 3,755 feet.

Shano Oil Co.'s No. 7 Betty Doby, top sand 3,726 feet, initial production 3 bbls. per hour through open tubing, total depth 3,737 feet. Stroube and Stroube's No. 14 R. J. Mackey, top sand 3,658 feet, initial production 45 bbls. in 55 minutes through open tubing, total depth 3,661 feet. Travis and Weir's No. 3-A L. P. League, top sand 3,637 feet, initial production 85 bbls. per hour through open tubing, total depth 3,646 feet. Urban Oil Co.'s No. 9 William Phillips, top sand 3,625 feet, initial production 35 bbls. in one-quarter hour through open tubing, total depth 3,648 feet. A. D. Whitman, Inc.'s No. 2 W. L. Brewley, top sand 3,717 feet, initial production 70 bbls. per hour through open tubing, total depth 3,728 feet.

WILDCAT COMPLETIONS

Bowie County

R. L. Lynn and W. R. Rolfe's No. 1 Mrs. D. Hart, location abandoned.

Kaufman County

Elzey Bentley, Brewer and others' No. 1 J. B. Hunter, dry and abandoned, total depth 1,630 feet (R. Sowell Survey).

Leon County

Standard Oil Co. of Kansas' No. 1 A. W. Johnson, location abandoned.

Van Zandt County

Gulf Oil Co.'s No. 1 Gillentine, dry and abandoned, total depth 1,246 feet (M. Gross Survey).

F. C. BERESFORD DIES

CALGARY, Alberta, Apr. 2.—Frederick C. Beresford, oil driller, died in a hospital here recently, aged 58. A native of Petrolia, Ontario, Mr. Beresford drilled in Persia and in the Signal Hill fields in California.

H. F. SINCLAIR ON CODE

CHICAGO, Apr. 2.—H. F. Sinclair had only praise today for the results of the NRA code on the oil industry.

"The Government's code," he said, "has basically aided the industry. "It has stabilized it and been of considerable benefit throughout. The price of crude oil has risen from 25 cents to $1 a barrel.

"The companies have not yet been able to realize on gasoline earnings in proportion to these advances, but we are hopeful that, through co-operation between the companies and the administration, this can be brought about."

DRAKE ANNIVERSARY STAMPS

OIL CITY, Pa., Apr. 3.—American Philatelic Society joins with oil men in urging a stamp issue commemorating the diamond anniversary of the Drake well. Matter now in hands of congressional committee.

J. A. MOFFETT RETURNS

NEW YORK, Apr. 2.—James A. Moffett, vice president of the Standard Oil Co. of California, has returned to the New York offices of the company from a several weeks' visit to European points.

East Central Texas Wildcats

(Continued from Page 41)

FANNIN COUNTY

L. Kean et al's No. 1 L. M. Boyd, 900 ft. from E line and 200 ft. from N line of survey, W. Hunt Sur. .... Drlg. 1,840 ft.

FREESTONE COUNTY

Clyde Creighton's No. 1 Holly Bros., 854 ft. from W and center N and S lines of lease, A.B.&M. Sur. ..... T.D. 5,140 ft.

Daniels Oil & Royalty Co.'s No. 1 P. D. C. Ball, 10,380 ft. from S line and 1,980 ft. from W line of survey, Jose Ignacio Auguilera Sur. ..... Drlg. 1,630 ft.

GREGG COUNTY

George Carver's No. 1 R. M. Wood, 2,250 ft. from S line and 100 ft. from W line of survey, H. R. Hokit Sur. ..... Waiting on cmt. to set; T.D. 3,636 ft.

Elseep Oil Co.'s No. 1 G. S. Mattox, 3,460 ft. from N line and 1,200 ft. from W line of survey, D. Sanches Sur. ..... Drlg. 2,760 ft.

Clyde H. Hall's (receiver) No. 1 North Chapel School, 1,180 ft. from W line and 100 ft. from N line of survey, M. Tennison Sur. ..... Drlg. 3,152 ft.

Idaho Oil Corp.'s No. 1 Dickson, 150 ft. from N line and 330 ft. from W line of 20-ac. lease, William Hester Sur. ..... Drlg. plug; T.D. 3,577 ft.

Mid-Field Oil Co.'s No. 1 A. C. McCormick, 850 ft. from N line and 2,620 ft. from most easterly W line of survey, W. P. Chisum Sur. ..... Location.

Powderhorn Petroleum Co.'s No. 1 R. Stell, 6,300 ft. from W line and 100 ft. from N line of John Wilkerson Sur. ..... S.D. 1,900 ft.

Snowden et al's No. 1 J. T. Florence, 6,120 ft. from W line and 6,000 ft. from S line of M. V. Winkle Sur. ..... Waiting on cmt. to set; T.D. 3,502 ft.

Sun Oil Co.'s No. 1 Cumi Wells, 330 ft. from W line, 1,800 ft. from S line of survey, M. Tennison Sur. .. Set surface csg.

Texas Gulf Prod. Co.'s No. 1 Register, 1,200 ft. from S line and 1,500 ft. from W line of survey, G. F. Penn Sur. ..... Derrick.

Webster Oil & Gas Co.'s No. 1 Register, 360 ft. from S line and 1,450 ft. from W line of survey, G. F. Penn Sur. ..... Waiting on cmt. to set; T.D. 2,400 ft.

HENDERSON COUNTY

H. A. Baker et al's No. 2 J. J. Dupuis, 250 ft. from S line, 250 ft. from E line of tract, Geo. Hancock Sur. .. Location.

Roy Black et al's No. 1 C. B. Meredith, 360 ft. from N and W lines of 64.5 ac. tract, 4 miles SE of Malakoff, Wiley Kay Sur. ..... Location.

Campbell and Champlin's No. 1 R. S. Ansley, 108 varas S. 623 varas W of NE cor. of lease, 6 miles SE of Buffalo, N. H. Thompson Sur. ..... Derrick.

McGlothin et al's No. 1 A. J. Saylor, 330 ft. from W line and 517 ft. from N and S lines of 101-ac. lease, 3 miles NE of Murchison, Anderson Webb Sur. .. Rig up.

McElreath and Suggett's No. 1 C. D. Franklin, 330 ft. from N line and center of E and W lines of S 38 acres of C. D. Franklin 95-ac. tract, Stephen Hatton Sur. ..... Rig up.

Rector-Webb et al's No. 1 C. A. Riddlesperger, 225 ft. from S and W lines of 50-ac. lease out of 203-ac. tract, 10 miles SE of Malakoff, W. F. Mitcham Sur. ..... Set surface csg.; T.D. 205 ft.

HUNT COUNTY

H. C. Waggoner et al's No. 1 Love, 300 ft. from N line, 6,300 ft. from W line of 95-ac. tract, John Gillisky Sur. ..... Spudding.

KAUFMAN COUNTY

W. J. Lewis et al's No. 1 D. Clark, 430 ft. from S line and 600 ft. from E line of survey, 6½ miles NW of Elmo ..... Shut down.

LAMAR COUNTY

Cole et al's (formerly Optometrist Oil Club) No. 1 J. M. McFaddin, 450 ft. from S and W lines of E 25-ac. tract, 10 miles NW of Paris, Joseph Dick Sur. ..... S.D. 2,506 ft.

LEON COUNTY

Cooper et al's No. 1 W. E. Cozart, 1,000 ft. from SE cor. of 266-ac. tract in SW part of county, Thomas Gardner Sur. ..... Rig up and S.D.

Gholson Drlg. Co.'s No. 1 Alliance Trust Co., 330 ft. S and E of Humble's Alliance Trust Co., 3,000-ac. tract, Simon Sanches Sur. No. 9 ..... Location.

Shell Petroleum Corp.'s No. 1 Lee, 1,500 ft. from NW and SW lines of farm and survey, William Cooper Sur. ..... Reaming to make drill stem test; T.D. 5,703 ft.

Tide Water Oil Co. and Texas Seaboard Oil Co.'s No. 1 G. W. Burkett, 3,500 ft. due S and 1,400 ft. from W at right angles from Magnolia Ferry, Simon Sanches Sur. No. A-23 ..... Bldg. road to location.

LIMESTONE COUNTY

C. M. Joiner et al's No. 1 S. A. Knobb, 900 ft. from N line and 1,000 ft. from W line of survey, one-half mile N of Falls County line, Luke Moore Sur. ..... S.D. 1,700 ft.

J. Rodgers et al's No. 1 Vol DeLone, 1,516 ft. from W line and 600 ft. from N line of W 100-ac. tract, Pedro Varela Sur. ..... Shut down.

NAVARRO COUNTY

W. J. Keeling et al's No. 1 J. F. Rushing, 484 ft. from N line and 150 ft. from W line of 184-ac. tract, 6 miles SW of Richardson, Henry Ford Sur. ..... Location.

J. B. Stoddard et al's No. 1 C. S. West estate, 1,000 ft. from W line and 650 ft. from N line of 682-ac. tract, Mathew Boren Sur., Abstract No. A-56 ..... Rigging up.

RAINES COUNTY

J. W. Hallsell et al's No. 1 P. F. Jones, 400 ft. out of SW cor. of 22-ac. tract, 2½ miles S of Alba, B.B. B.&C. Sur. ..... Drlg. 400 ft.

RUSK COUNTY

George Hudson et al's No. 3 Jeff Phillips, 150 ft. from N line of survey and 700 ft. from W line of 100-ac. tract, 4 miles SE of Minden, N. Villaria Sur. .... Drlg. 2,500 ft.

Johnson et al's No. 1 I.&G.N.R.R., 3,920 ft. from E line, 400 ft. from S line of survey, Wm. Kellen Sur. .... Rig up.

A. A. Oil Co.'s No. 1 Geo. Curbo, 1,900 ft. from S line, 330 ft. from E line of Wm. Christian Sur. ..... Location.

L. I. Sugar's No. 1 Still, 3,210 ft. from W line and 1,175 ft. from N line of survey, John Wilkinson Sur. ..... Waiting on cmt. to set; T.D. 3,555 ft.

SMITH COUNTY

W. E. Farley et al's No. 1 Gant estate, 330 ft. N of Sinclair's Wiley lease, J. Jordan Sur. ..... Waiting on cmt. to set 3,750 ft.

Humble Oil & Refining Co.'s No. 1 H. C. Tucker, 2,030 ft. from N line and 700 ft. from E line of survey, J. Bell No. A-160 Sur., 3 miles SW of Friendship .. Drlg. 1,190 ft.

J. I. Staley's No. 1 J. B. Wilson, 2,220 ft. from N line, 9,750 ft. from E line of James Jordan Sur. ..... Derrick.

UPSHUR COUNTY

D. C. Fisher and Dye's No. 1 Starr, 700 ft. from N line and 700 ft. from W line of survey, Charles Cooper Sur. ..... Running csg.; T.D. 3,589 ft.

Virgil Hodges et al's No. 1 J. M. Floyd, 330 ft. from NE cor. of 126-ac. tract, 4 miles N of Gladewater, Railroad Sur. ..... Derrick.

VAN ZANDT COUNTY

Gillum and Allen et al's No. 1 A. T. Bass, 150 ft. from W. line and 150 ft. from N line of 10-ac. tract, William Hart Sur. ..... S.D. 60 ft.

Griffith Bros.' No. 1 Bruce, 1,000 ft. from S line and 330 ft. from E line of 124-ac. tract, G. Martinez Sur. ..... S.D. 1,562 ft.

Humble O. & R. Co.'s No. 1 S. R. Ray, 200 ft. S. 160 ft. W of J. D. Listenbee 30-ac. lease in Nacogdoches County School Lands Sur. ..... Waiting on pumping equipment; T.D. 1,237 ft.

W. E. McKinney et al's No. 1 B. T. Davis, 210 ft. from N line and 160 ft. from W line of 139-ac. tract, J. Goodman Sur. ..... Drlg. 1,325 ft.

Pure Oil Co.'s No. 2 Ray, 250 ft. N of S line and 182 ft. W of E line of tract, Nacogdoches County School Land Sur, elev. 449.7 ft. ..... S.D. 1,215 ft.

Pure Oil Co.'s No. 4 R. C. Crim, 700 ft. N of S line, 241 ft. W of E line, Nacogdoches County School Land Sur. ..... S.D. 2,944 ft.

Pure Oil Co.'s No. 7 I. D. Miller, 150 ft. S of N line and 210 ft. W of E line of I. D. Miller 60-ac. tract, John Walling Sur. ..... Derrick.

Pure Oil Co.'s No. 16 R. L. Wells, 420 ft. W of E line and 500 ft. N of S line of R. L. Wells 26-ac. tract, H. V. Moore Sur. ..... Rig up.

Ray Drlg. Co.'s No. 1 J. W. Mallory, 1,150 ft. from S line, 150 ft. from W line of 217-ac. tract, John Walling Sur. ..... Spudding.

J. D. Wrather et al's No. 1 G. W. Carter, 890 ft. from S line, 150 ft. from W line of 171-ac. tract, 4 mi. NE of Van, Wm. Daniel Sur. ..... Drlg. 1,450 ft.

WOOD COUNTY

D. T. Cauble and Thompson's No. 1 N. G. Bobett, 650 ft. from S line and 220 ft. from W line of tract, 4½ miles NW of Mineola, Daniel Fuller Sur. ..... Fishing; T.D. 4,970 ft.

McElreath and Suggett's No. 1 B. D. Holley, 466 ft. from S and W lines of Holly tract, 3 miles SW of Winnsboro, James M. Moore Sur. ..... Location.

Wildcat Operations in West Texas

(Continued from Page 42)

ECTOR COUNTY

Atlantic Oil & Prod. Co.'s No. 3 Holt, 660 ft. from N line and 1,980 ft. from E line of Sec. 19, Blk. A, P.S.L. Sur. ..... Location.

C. J. Davidson et al's No. 1 Cole, 660 ft. from N line and 660 ft. from W line of Sec. 10, Blk. 45, Twp. 1s, T.&P. Sur. ..... Rig up rotary

Harrison et al's No. 2 Addis, 990 ft. from N line and 2,200 ft. from W line of Sec 35, Blk. 43, Twp. 2s, T.&P. Sur. ..... Drlg. by tools; T.D. 3,836 ft.

Harrison et al's No. 3 Addis, 1,650 ft. from N line and 2,200 ft. from W line of Sec. 35, Blk. 43, Twp. 2s, T.&P. Sur. ..... Location.

Honolulu Oil Co. et al.'s No. 1 Kloh, 660 ft. from E and 1,980 ft. from S of Sec. 33, Blk. 44, Twp. 2s, T.&P. Sur. ..... Underreaming at 1,195 ft.

Humble Oil & Ref. Co.'s No. 1 Thomas J. Martin, 330 ft. from N and 440 ft. from E line of Sec. 38, Blk. 43, T.&P. Sur. ..... T.D. 4,318 ft.; testing; flowed 60 bbls. of oil and 1 bbl. of salt water.

Humble Oil & Ref. Co.'s No. 2 E. J. Jones, 660 ft. from S line and 1,988 ft. from the W line of Sec. 6, Blk. 44, Twp. 3s, T.&P. Sur. ..... Drlg. 740 ft.

Landreth Prod. Co.'s No. 2 O. B. Holt, 660 ft. from S and E lines of Sec. 15, Blk. 43, Twp. 1n, T.&P. Sur. ..... Rig up.

Landreth Prod. Co. and Llano Oil Co.'s No. 2 O. B. Holt, 1,980 ft. from W and 1,980 ft. from N, Sec. 20, Blk. A, P.S.L. Sur. ..... Drlg. 4,244 ft.

Landreth-Llano Oil Co.'s No. 3 Holt, 660 ft. from N line and 660 ft. from W line of Sec. 20, Blk. A, P.S.L. Sur. ..... Drlg. 3,880 ft.

McCurdy et al's No. 1 Foster, 330 ft. from S line and 440 ft. from W line of Sec. 36, Blk. 43, Twp. 2s, T.&P. Sur. ..... Fishing; T.D. 1,050 ft.

Moran Drlg. Co.'s No. 1 Smith, 330 ft. from N line, 330 ft. from W line of Sec. 12, Blk. 43, Twp. 1s, T.&P. Sur. ..... S.D. 4,425 ft.

Shell Pet. Corp.'s No. 2 Jones, 660 ft. from S line and 1,980 ft. from E line, Sec. 6, Blk. 44, Twp. 3s, T.&P. Sur. ..... Location.

Skelly Oil Co.'s No. 1 Addis, 990 ft. from N line, 2,200 ft. from E line of Sec. 35, Blk. 43, Twp. 2s, T.&P. Sur. ..... Flowing 36 bbls. of oil per day through tubing; T.D. 4,375 ft.; plugged back to 4,355 ft.; will acidize.

Stanolind O. & G. Co.'s No. 3 E. F. Cowden, 2,275½ ft. E and 330 ft. from S line, Sec. 26, Blk. 43, Twp. 2s, T.&P. Sur. ..... S.D. 3,493 ft.

Stanolind Oil & Gas Co.'s No. 4 J. M. Cowden, 660 ft. from N and 1,980 ft. from E line of Sec. 27, Blk. 43, Twp. 1n, T.&P. Sur. ..... T.D. 4,321 ft. proration gauge 551 bbls. daily.

Stanolind Oil & Gas Co.'s No. 5 J. M. Cowden, 660 ft. from N and 1,980 ft. from E line of Sec. 34, Blk. 43, Twp. 1n, T.&P. Sur. ..... T.P. 4,134 ft.; flowing 138 bbls. daily; T.D. 4,234 ft.

Fred Turner, Jr.'s No. 1-C F. V. Addis, 1,650 ft. from the N line and 2,200 ft. from the W line of Sec. 35, Blk. 43, Twp. 2s, T.&P. Sur. ..... T.D. 3,881 ft.; to run csg.

Fred Turner's No. 2-A Addis, 2,310 ft. from N and 440 ft. from E of Sec. 35, Blk. 43, Twp. 2s, T.&P. Sur. ... Cellar.

FISHER COUNTY

Condor Pet. Co.'s No. 1 Herring, 450 ft. from S and 330 ft. from W line of Sec. 192, Blk. 1, B.B.B.&C. Sur. ..... Rig up.

Condor Pet. Co.'s No. 2 Wilson, 640 ft. from N and 2,310 ft. from W line of Sec. 6, Blk. R, W. E. Richardson Sur. ..... Cellar.

Cranfill & Reynolc's' No. 3 J. H. Young, 330 ft. W and 330 ft. S of NE cor. of survey, Sec. 208, B.B.B.&C. Sur. ..... Drlg. 3,000 ft.

Merry Bros. and Perini's No. 1 J. J. Steele, 330 ft. E and 150 ft. N of SW cor. NE Sec. 210, B.B.B.&C. Sur. ..... Swabbed 500 bbls. in 24 hrs.; treated with acid; T.D. 3,190 ft.

E. L. Smith Oil Co.'s No. 1 fee, 450 ft. from S and 330 ft. from E, Sec. 203, Blk. 1, B.B.B.&C. Sur. ..... Drlg. 2,790 ft.

Roeser & Pendleton's No. 2 Frank Steele, 1,470 ft. from S and 990 ft. from W line of Sec. 210, Blk. 1, B.B.B.&C. Sur. ..... Drlg. 2,390 ft.

Sinclair Prairie Oil Co.'s No. 2 Frank Steele, 990 ft. from N and 330 ft. from E line of Sec. 72, Blk. 1, H.&T.C. Sur. ..... Drlg. 2,300 ft.

Stanolind Oil & Gas Co.'s No. 3 F. Steele, 660 ft. from S and 2,310 ft. from W line of Sec. 210, Blk. 1, B.B.B.&C. Sur. ..... S.D. 3,185 ft.

Stanolind Oil & Gas Co.'s No. 4 Steele, 1,170 ft. from S and 1,650 ft. from W line of Sec. 210, Blk. 1, B.B.B.&C. Sur. ..... Drlg. 2,610 ft.

Southern's No. 1 King, 660 ft. from N and 330 ft. from W line of SW Sec. 193, B.B.B.&C. Sur. ..... Drlg. 2,500 ft.

Texas Inland Oil & Gas Co.'s No. 1 First National Bank of Hamlin, 1,980 ft. from N and 990 ft. from W, Sec. 191, Blk. 1, B.B.B.&C. Sur. ..... Swabbed 94 bbls.; T.D. 3,107 ft.

Texas Co.'s No. 4 T. A. Jean, 920 ft. from N and E lines of Sec. 201, Blk. 1, B.B.B.&C. Sur. ..... Drlg. 2,604 ft.

GLASSCOCK COUNTY

Empire Gas & Fuel Co.'s No. 2 Hall, 330 ft. from N and W lines of Sec. 21, Blk. 33, Twp. 2s, T.&P. Sur. ..... Waiting on cmt. to set; T.D. 2,060 ft.

John I. Moore et al's No. 1 J. S. McDowell, 1,980 ft. from N line and 660 ft. from E line of Sec. 22, Blk. 34, Twp. 2s, T.&P. Sur. ..... Bldg. derrick.

HOWARD COUNTY

L. C. Harrison et al's No. 2 Texas Land & Mortgage Co., 2,310 ft. from E line and 330 ft. from the S line of Sec. 4, Blk. 30, Twp. 1s, T.&P. Sur. ..... Location.

Humble Oil & Ref. Co.'s No. 2 Settles, 990 ft. from W and 330 ft. from S, Sec. 132, Blk. 29, W.&N.W. Sur. ... Waiting on cmt. to set; T.D. 2,277 ft.

Merrick & Lamb's No. 11 Chalk, 2,310 ft. from N line and 990 ft. from W line of Sec. 125, Blk. 29, W.&N.W. Sur. ..... Drlg. 1,365 ft.

Permian Pacific Pet. Co.'s No. 1 Capps, 330 ft. from SW cor. of Sec. 17, Blk. 29, Twp. 1n, T.&P. Sur. ..... Location.

Plymouth Oil Co.'s No. 10 Kloh, 660 ft. from S line and 660 ft. from W line of Sec. 5, Blk. 32, Twp. 2s, T.&P. Sur. ..... Bldg. derrick.

Joe Rusk et al's No. 3 G. M. Dodge, 330 ft. from the N line, 330 ft. from the E line, Sec. 9, Blk. 30, Twp. 1s, T.&P. Sur. ..... Location.

Schermerhorn Oil Co.'s No. 8 Kloh, 1,650 ft. from S and 330 ft. from W, Sec. 13, Blk. 28, Twp. 2s, T.&P. Sur. ..... Waiting on cmt. to set; T.D. 2,405 ft.

Sinclair Prairie Oil Co.'s No. 1 Perry Jones, 2,310 ft. from W and 330 ft. from N, Sec. 9, Blk. 30, Twp. 1s, T.&P. Sur. ..... S.D. 818 ft.

Sinclair Prairie Oil Co.'s No. 10 Dodge, 2,310 ft. from S and 330 ft. from E, Sec. 1, Blk. 30, Twp. 1s, T.&P. Sur. ..... Flowed 50 bbls. of oil first 24 hrs.; cleaning out; T.D. 2,808 ft.

Sinclair Prairie Oil Co.'s No. 12 Dodge, 330 ft. from S line and 2,360 ft. from W line, Sec. 11, Blk. 30, Twp. 1s, T.&P. Sur. ..... Location.

Sloan & Lewis' No. 1 Daniell, 2,475 ft. from E and 330 ft. from S of Sec. 18, Blk. 31, Twp. 1n, T.&P. Sur. ... Moving in material.

Southern Oil Co.'s No. 1 Denman, 2,310 ft. from N line and 330 ft. from W line of Sec. 10, Blk. 30, Twp. 1s, T.&P. Sur. ..... Drlg. 2,670 ft.

Sun Oil Co.'s No. 6 Phillips, 1,650 ft. from S and 330 ft. from E, Sec. 14, Blk. 33, Twp. 2s, T.&P. Sur. ..... Junked hole; skidded 50 ft. north; rig up rotary.

IRION COUNTY

Williams-Short's No. 1 Gentry, 2,200 ft. from N line and 2,080 ft. from W line of Sec. 1, Blk. 3, H.&T.C. Sur... S.D. 835 ft.

JONES COUNTY

C. P. Campbell's No. 3 Herndon, 1,450 ft. from S line and 800 ft. from W line, Sec. 6, M.E.P.&P. Sur. ..... Cleaning out; T.D. 2,475 ft.

Clay & Lancaster's No. 2 Brewer, 700 ft. S and 150 ft. E of NW cor. of J. W. Martin Sur. ..... Rig up and S.D.

Elmer Close et al's No. 1 A. B. Faulks, 330 ft. from N line and 330 ft. from W line of Subdiv. No. 27, Henry Millard Sur. ..... S.D. 1,400 ft.

Condor Pet. Co.'s No. 2 Sayles, 650 ft. from N line and 960 ft. from W line of Sec. 3, Blk. 20, T.&P. Sur. ... Derrick.

C. C. Julian Rec.'s No. 4 Swan, 2,160 ft. from N line and 1,320 ft. from W line, I. Miley Sur. No. 281 .... Drlg. 2,080 ft.

Knight, Baker and Pardue's No. 1 A. W. Hill, 540 ft. from N line and 690 ft. from E line of Lot No. 1, Blk. 4, A. W. Hill Sur. ..... Drlg. 1,810 ft.

Southern Oil Corp.'s No. 2 Williams, 330 ft. from S and W line of Sec. 17, Blk. 19, T.&P. Sur. ..... Machine.

LOVING COUNTY

R. L. Allen's No. 2 fee, 4,290 ft. from NE line, 990 ft. from SE line, Sec. 82, Blk. 33, H.&T.C. Sur. ..... Location.

R. L. Allen's No. 3 fee, 4,290 ft. from NE line, 990 ft. from NW line, Sec. 82, Blk. 33, H.&T.C. Sur. ..... Location.

R. L. Allen's No. 4 fee, 4,200 ft. from NE line, 330 ft. from NW line, Sec. 82, Blk. 33, H.&T.C. Sur. ..... Location.

The California Oil Co.'s No. 8 Reagan-McElvain, 330 ft. from NW and SW lines of Sec. 84, Blk. 1, W.&N.W. Sur. ..... Moving in material.

Eppenauer Drlg. Co.'s No. 3 Hammill & Ellis, 410 ft. from NW and 796 ft. from NE lines of Sec. 3, Blk. 1, W.&N.W. Sur. ..... Material on ground.

William Little's No. 1 Reichard & Dehle, 1,320 ft. from NE and 1,120 ft. from SE line of Sec. 93, Blk. 1, W.&N.W. Sur. ..... Drlg. 3,904 ft.

H. W. Martin's No. 4 Wheat, Ramsey, 990 ft. from SE and SW lines of Sec. 83, Blk. 1, W.&N.W. Sur. ..... Derrick.

Sinclair Prairie Oil Co.'s No. 2 Bell, 410 ft. from SE and 1,025 ft. from NE of Sec. 91, Blk. 1, W.&N.W. Sur. ..... Drlg. 3,050 ft.

Texas Pacific Coal & Oil Co.'s No. 1 Carmine, C of SE of SW of Sec. 40, Blk. 54, Twp. 1, T.&P. Sur. ..... Drlg. 3,500 ft.

PECOS COUNTY

Mack T. Anderson's No. 1 McKenzie, 660 ft. from S line and 660 ft. from W line of Sec. 1, Blk. 604 ..... Location.

California Oil Co.'s No. 14 Mrs. M. A. Smith Lease No. 3, 2,028 ft. from the S line and 1,650 ft. from the E line of Sec. 35, Blk. 194, E.&T.C. Sur. ..... Waiting on cmt. to set; T.D. 1,206 ft.

Cardinal Oil Co.'s No. 17-E Tippett, 150 ft. from E line of W half and 730 ft. from N of No. 5-E, Sec. 40, Blk. 194, G.C.&S.F. Sur. ..... Waiting on cmt. to set; T.D. 481 ft.

Cardinal Oil Co.'s No. 18 J. H. Tippett, 850 ft. from N and 531 ft. from W of the SE cor. of the W half of Sec. 40, Blk. 194, G.C.&S.F. Sur. ..... T.P. 528 ft.; T.D. 540 ft.; plugged back to 535 ft.

Culberson Bros.'s No. 15-B Monroe, 725 ft. from N line and 1,320 ft. from E line of Sec. 39, Blk. 194, G.C.&S.F. Sur. ..... Location.

Humble Oil & Ref. Co. and Planning Pet. Co.'s No. 1 J. L. Nutt, 2,960 ft. from the N line and 890 ft. from the E line of Sec. 16, Blk. 125, T.&St.L. Sur. ... Drlg. 1,030 ft.

Humble Oil & Ref. Co.'s No. 1 White, Baker, 1,320 ft. from N and E lines of Sec. 44, Blk. Z, T.C. Sur. ..... Drlg. 8,668 ft.

Mid-Kansas Oil & Gas Co.'s No. 18 Smith-Taylor, 1,296 ft. from S line, 1,390 ft. from W line, Sec. 33, Blk. 194, G.C.&S.F. Sur. ..... Location.

Mid-Kansas Oil & Gas Co.'s No. 24 Smith-Taylor, 250 ft. W of S half of Turner Tract No. 1, Sec. 33, Blk. 194, G.C.&S.F. Sur. ..... Road.

Mid-Kansas Oil & Gas Co.'s No. 8 Fred Turner, Jr., 363 ft. from N and 55 ft. E of N half of Tract No. 1, Fred Turner Sur. ..... Drlg. 1,320 ft.

Mid-Kansas Oil & Gas Co.'s No. 25 Smith-Taylor, 344 ft. W of SE cor. of S half of Turner Trace No. 1, Sec. 33 ..... S.D. 750 ft.

Mid-Kansas Oil & Gas Co.'s No. 26 Smith-Taylor, 395 ft. S and 344 ft. E of SE cor. of S half of Tract No. 1 ..... Cellar.

Mid-Kansas Oil & Gas Co.'s No. 1 Turner, 250 ft. from N line and 250 ft. from W line of Turner Sur. No. 3.. S.D. 590 ft.

Mid-Kansas Oil & Gas Co.'s No. 2 Fred Turner, 835 ft. from S line and 500 ft. from W line of Tract No. 2.. Drlg. 1,400 ft.

Mid-Kansas Oil & Gas Co.'s No. 8 Fred Turner, 204 ft. S and 55 ft. W of the most northerly NW cor. of I. G. Yates Sur. A-3,195, but in Fred Turner, Jr., Sur., Tract No. 1 ..... T.D. 500 ft.

Mid-Kansas Oil & Gas Co.'s No. 12-H Yates, 408 ft. S of N line of Sec. 32 and 344 ft. W of SE cor. of S half of Tract No. 1 ..... Location.

Mid-Kansas Oil & Gas Co.'s No. 13-H Yates, 408 ft. S of N line of Sec. 32 and 344 ft. E of SE cor. of S half of Tract No. 1 ..... Location.

Mid-Kansas Oil & Gas Co.'s No. 38-A Yates, 250 ft. E and 205 ft. S from the NE cor. of Turner Tract No. 3 in Sec. 34½, I. G. Yates Sur. ..... Location.

Mid-Kansas Oil & Gas Co.'s No. 39-A Yates, 150 ft. N and 250 ft. W of the NW cor. of Turner tract No. 4, in Sec. 34½, I. G. Yates Sur. ..... Cellar.

Mid-Kansas Oil & Gas Co.'s No. 40-A Yates, 344 ft. from E line and 395 ft. from N of SE cor. of S half of Turner Tract No. 1 ..... S.D. 680 ft.

Mid-Kansas Oil & Gas Co.'s No. 33-B Yates, 1,010 ft. from S line and 500 ft. from W line of Sec. 61, I.&G.N. Sur. ..... Drlg. 320 ft.

Mid-Kansas Oil & Gas Co.'s No. 34-B Yates, 1,088 ft. from N line and 498 ft. from W line of Sec. 61, I.&G.N. Sur. ..... Cellar.

Simms Pet. Co.'s No. 2 A. J. Devlin, 330 ft. from the N line and 330 ft. from the E line of the most easterly NE cor. of Sec. 2, John D. Duval Sur., Abst. No. 3,824 ..... Location.

REAGAN COUNTY

E. P. Kirschner and White's No. 1 W. A. White and McIntosh, 720 ft. from E and 800 ft. from N of Sec. 1,223, E.L.R.R. Sur. ..... Drlg. 2,060 ft.

REEVES COUNTY

Grisham-Hunter Corp.'s No. 1 fee, 1,320 ft. from N line, 1,320 ft. from the E line of Sec. 10, Blk. 50, Twp. 8, T.&P. Sur. ..... Location.

Hugo Freels' No. 1 B. Greenman, 330 ft. from NE line and 231 ft. from SE line of Sec. 21, Blk. 2, H.&G.N. Sur. ..... Fishing for tools; T.D. 3,985 ft.

C. H. Lockhart et al's No. 1 W. D. Johnson, 330 ft. from N line and 330 ft. from W line of Sec. 3, Blk. C-13, P.S.L. Sur. ..... Location.

RUNNELS COUNTY

Agnew & Sons' No. 2 Fowler, 1,165 ft. from S and 150 ft. from W of NE cor. of Blk. 23, N. Travis Sur. .... Drlg. 1,955 ft.

Agnew and Currie's No. 1 H. E. Wade, 2,640 ft. from N line and 320 ft. from E line of Sec. 24, Domingo Diaz Sur. No. 532 ..... Digging cellar.

Anderson et al's No. 1 W. F. James, 330 ft. from N and W lines of Subdiv. No. 20, Norvell Travis Sur. ..... Spudded and S.D.

Castor & Anderson et al's No. 1 W. F. James, 174 ft. from W line of Subd. No. 30, Norvell Travis Sur. No. 533 ..... S.D. 850 ft.

L. L. Evans et al's No. 1 L. P. Woods, 330 ft. from SE line and 200 ft. from SW lines of section, T. Williams Sur. No. 529 (old hole being reworked) ..... Old T.D. 3,485-95 ft.; will treat with acid.

Golden Pet. Corp.'s No. 2 McMillan, 780 ft. from W and 330 ft. from N of Subdiv. No. 22, N. Travis Sur. No. 533 ..... T.D. 2,378 ft.

Melrose Oil Co.'s No. 1 L. P. Woods, 150 ft. from NE lines and 3,475 ft. from W line of survey, Willett Holmes Sur. No. 100 ..... S.D. 80 ft.

Roberts Oil Corp.'s No. 1 J. L. King, 660 ft. from N line and 470 ft. from W line of most northerly King tract (old well being drilled deeper) ..... Standing with 2,500 ft. water in hole; old T.D. 3,730 ft.

W. S. Sawyer et al's No. 1 Giesecke, 1,211 ft. from N and 4,606 ft. from E lines of survey, Blk. 131, James Hughes Sur. ..... S.D. 1,200 ft.

Prairie Oil & Gas Co.'s No. 1 T. B. Wade, 2,597 ft. from N and 2,140 ft. from E line of Subdiv. No. 16, Norvel Travis Sur. ..... Underreaming 1,775 ft.

R. Tucker et al's No. 5 McMillan, 260 ft. from N and W lines of that part of Subd. No. 22 in the D. Diaz Sur. ..... Location.

Wahlenmaier Pet. Co.'s No. 1 T. C. Hall, 330 ft. out of SW cor. E.T.R.R. Sur. No. 149 ..... S.D. 2,617 ft. to plug; half full of water 2,390-2,400 ft.

F. D. Williams' No. 1 J. L. Elkins, 2,225 ft. from E and 1,300 ft. N of SW cor. of Blk. 12, but in Blk. 13, N. Travis Sur. No. 533 ..... S.D. 1,500 ft.

SCHLEICHER COUNTY

H. E. Cooper et al's No. 1 Bert Page, 1,290 ft. from N line and 1,470 ft. from W line of Sec. 40, Blk. L, G.H.&S.A. Sur. (old well being drilled deeper) ..... Rig burned; T.D. 5,053 ft.

TERRELL COUNTY

H. H. Sides' No. 1 Phelps, 2,157 ft. from N line and 2,482 ft. from the W line of Sec. 5, Blk. 4-A, G. W. Turley Sur. ..... S.D. 5,635 ft.

UPTON COUNTY

Gulf Prod. Co.'s No. 103 McElroy, 1,980 ft. from S and 660 ft. from W, Sec. 197, Blk. F, C.C.S.D.&R.G.N.G. Sur. ..... Drlg. 9,503 ft.

Powell-Gap Oil Co.'s No. 1 J. F. Lane, 1,320 ft. from W line of Sec. 1, G.C.&S.F. Sur. ..... Drlg. 1,315 ft.

Texas Pacific Coal & Oil Co.'s No. 1-C J. H. Sherk, 1,650 ft. from S and 330 ft. from W, Sec. 1, Blk. 3-B, M.K.&T. Sur. ..... Drlg. 2,265 ft.

Texas Pacific Coal & Oil Co. and Simms Pet. Co.'s No. 2 J. F. Lane, 990 ft. from the S line and 330 ft. from the W line of Sec. 36, Blk. 1, M.K.&T. Sur... Drlg. 2,400 ft.

Williams & Williams Drlg. Co.'s No. 1 Robbins, 1,600 ft. from S and 1,900 ft. from E, Sec. 4, G.C.&S.F. Sur.... Drlg. 1,795 ft.

VAL VERDE COUNTY

South-Western Exploration Co.'s No. 1 E. K. Fawcett, 2,310 ft. from S and 2,310 ft. from E, Sec. 14, Blk. L, G.C.&S.F. Sur. ..... Rig up.

WARD COUNTY

Alexander's No. 1 Richter, 1,650 ft. from NW, 1,170 ft. from NE line of Sec. 27, Blk. 33, H.&T.C. Sur. ..... Fishing for tools; T.D. 1,460 ft.

Alpine Oil & Dev. Co.'s No. 1 Johnson, 990 ft. from NE and 1,321 ft. from SE of Sec. 10, Blk. 32, H.&T.C. Sur. ..... S.D. 2,246 ft.; pumped 3 bbls. of oil in 24 hrs.

Atlantic Oil & Prod. Co.'s No. 13 Johnson, 330 ft. from NE line and 330 ft. from SE line of Sec. 9, Blk. 34, H.&T.C. Sur. ..... Waiting on proration test; T.D. 2,533 ft.

Atlantic Oil & Prod. Co.'s No. 15 Johnson, 330 ft. from SE line and 1,650 ft. from NE line of Sec. 9, Blk. 34, H.&T.C. Sur. ..... Drlg. 2,310 ft.

Atlantic Oil & Prod. Co.'s No. 16 W. D. Johnson, 320 ft. from NE and 320 ft. from NW lines of Sec. 9, Blk. 34, H.&T.C. Sur. ..... Location.

L. G. Bradstreet et al's No. 1 Lee Monroe, 2,310 ft. from NE and 330 ft. from SE lines of Sec. 77, Blk. 34, H.&T.C. Sur. ..... S.D. 1,037 ft.

California Oil Co.'s No. 5 York, 1,650 ft. from S and 990 ft. from SW, Sec. 10, Blk. 34, H.&T.C. Sur. ..... Testing; T.D. 2,526 ft.

California Oil Co.'s No. 6 J. F. York, 2,310 ft. from the NW line and 990 ft. from the SW line of Sec. 10, Blk. 34, H.&T.C. Sur. ..... Drlg. 2,142 ft.

S. Caprito et al's No. 3 John B. Bennett, 330 ft. from the NE line and 330 ft. from the SE line of Sec. 16, Blk. 34, H.&T.C. Sur. ..... Drlg. 2,105 ft.

Gibraltar Oil Co.'s No. 1 Richter, 1,170 ft. from SW and 1,650 ft. from NW lines of Section 23, Blk. 34, H.&T.C. Sur. ..... S.D. 2,567 ft.

Gulf Prod. Co.'s No. 42 O'Brien, 2,310 ft. from N and 330 ft. from S. Sec. 17, Blk. F, G.M.M.B.&A. Sur. .... Drlg. 2,673 ft.

Gulf Prod. Co.'s No. 25 Hutchins, 1,650 ft. from N line and 330 ft. from W line of Sec. 4, Blk. F, G.M.M. B.&A. Sur. ..... Flowed 555 bbls. in 24 hrs.; T.D. 2,747 ft.

Gulf Prod. Co.'s No. 26 Hutchins, 889 ft. from N line and 440 ft. from W line of Sec. 7, Blk. O, G.M.M. B.&A. Sur. ..... Drlg. 2,689 ft.

Gulf Prod. Co.'s No. 27 Hutchins, 2,310 ft. from N line and 330 ft. from W line of Sec. 4, Blk. F, G.M.M.B.&A. Sur. ..... Drlg. 610 ft.

Gulf Prod. Co.'s No. 43 O'Brien, 2,310 ft. from N line and 990 ft. from W line, Sec. 17, Blk. F, G.M.M. B.&A. Sur. ..... Drlg. 2,590 ft.

Gulf Prod. Co.'s No. 44 O'Brien, 2,310 ft. from N line, 330 ft. from W line of Sec. 17, Blk. F, G.M.M.B.&A. Sur. ..... Drlg. 1,285 ft.

Gulf Prod. Co.'s No. 45 O'Brien, 1,650 ft. from S line and 330 ft. from E line of Sec. 17, Blk. F, G.M.M. B.&A. Sur. ..... Location.

Humble Oil & Ref. Co.'s No. 2 Louis Richter, 1,650 ft. from the NW line and 1,470 ft. from the SW line of Sec. 23, Blk. 34, H.&T.C. Sur. ..... Set csg.; T.D. 2,040 ft.

Jack Leidecker's No. 2 Archenhold, 2,310 ft. from NE and 2,310 ft. from SE, Sec. 23, Blk. 5, H.&T.C. Sur.... Drlg. 2,905 ft.

Jack Leidecker et al's No. 1 Shell-Sloan, 990 ft. from NE and 330 ft. from NW of Sec. 15, Blk. 5, H.&T.C. Sur. ..... Drlg. 1,485 ft.

Rector Oil Co.'s No. 1 Lee Monroe, 660 ft. from NE and 660 ft. from SE of Sec. 62, Blk. 33, H.&T.C. Sur... S.D. 4,649 ft.

Simms Oil Co.'s No. 1 Mason, 2,310 ft. from SE and SW lines of Sec. 14, Blk. 34, H.&T.C. Sur. ..... T.D. 2,456 ft.; will shoot.

Simms Oil Co.'s No. 1 W. D. Johnson, 330 ft. from the NE and SE lines of Sec. 28, Blk. 34, H.&T.C. Sur. ... S.D. 2,580 ft.

Sinclair Prairie Oil Co.'s No. 4 Archenhold, 2,310 ft. from NW line and 2,310 ft. from SW line of Sec. 23, Blk. 5, H.&T.C. Sur. ..... Running tubing; T.D. 3,059 ft.

Sinclair Prairie Oil Co.'s No. 5 Archenhold, 2,310 ft. from SE and 2,310 ft. from SW of Sec. 23, Blk. 5, H.&T.C. Sur. ..... Material on ground.

Tex-Mex Pet. Corp. et al's No. 2 Llano-Sloan, 990 ft. from NW and 2,310 ft. from SW, Sec. 16, Blk. 5, H.&T.C. Sur. ..... Drlg. 2,608 ft.

Tex-Mex Pet. Corp.'s No.2-B Shell-Sloan, 2,310 ft. from NE and 990 ft. from NW, Sec. 16, Blk. 5, H.&T.C. Sur. ..... Cellar.

Tex-Mex Pet. Corp. et al's No. 2 Cal-Archenhold, 990 ft. from NE and 330 ft. from SE, Sec. 23, Blk. 5, H.&T.C. Sur. ..... Drlg. 2,000 ft.

Tex-Mex Oil Co.'s No. 3-B Shell-Sloan, 1,650 ft. from NE and 330 ft. from NW lines of Sec. 16, Blk. 5, H.&T.C. Sur. ..... Rig up.

S. A. Thompson et al's No. 7-A Johnson, 990 ft. from NW and 1,650 ft. from SW of Sec. 9, Blk. 34, H.&T.C. Sur. ..... Waiting on proration test; T.D. 2,534 ft.

WINKLER COUNTY

Colonial Oil Co.'s No. 4 Amerada-Scarborough 990 ft. from N line and 990 ft. from E line of Sec. 18, Blk. T4, P.S.L. Sur. ..... Drlg. 255 ft.

Magnolia Pet. Co.'s No. 4 Scarborough, 1,650 ft. from N line and 330 ft. from W line of Sec. 1, Blk. 77, P.S.L. Sur. ..... Cleaning out; T.D. 2,995 ft.

Magnolia Petroleum Co.'s No. 2 Walton, 330 ft. from N and 330 ft. from E, Sec. 19, Blk. 74, P.S.L. Sur. ..... Drlg. by tools.

Magnolia Pet. Co.'s No. 5 Scarborough, 1,650 ft. from N line and 370 ft. from E line of Sec. 18, Blk. 74, P.S.L. Sur. ..... S.D. 160 ft.

McCurdy & Easter's No. 1 Scarborough, 1,650 ft. from W and 2,310 ft. from S, Sec. 1, Blk. 77, P.S.L. Sur.... Rigging up and S.D.

Sid Richardson's No. 2-B Scarborough, 2,310 ft. from E line and 990 ft. from S line of Sec. 18, Blk. 74, P.S.L. Sur. ..... Fishing; T.D. 2,719 ft.

Sid Richardson's No. 5-A Scarborough, 330 ft. from W and 190 ft. from S, Sec. 1, Blk. 22-C, P.S.L. Sur. ..... Moving in machine.

Sid Richardson's No. 1-B Tidal-Scarborough, 990 ft. from S line, 330 ft. from W line, Sec. 4, Blk. C-22, P.S.L. Sur. ..... Drlg. 2,530 ft.

Sid Richardson's No. 1-D Scarborough, 990 ft. from N line and 1,650 ft. from E line of Sec. 18, Blk. 74, P.S.L. Sur. ..... S.D. 3,074 ft.

Sinclair Prairie Oil Co.'s No. 1-C Scarborough, 2,310 ft. from W and 102½ ft. S of SE cor. Sec. 1, Blk. 22-C, P.S.L. Sur. ..... T.P. 2,971 ft.; T.D. 2,989 ft.

Sinclair Prairie Oil Co.'s No. 2-C State-Scarborough, 102 ft. N and 1,650 ft. W of NE cor. of Sec. 1, Blk. 77, P.S.L. Sur. ..... Bldg. derrick.

Wildcat Operations in Texas Panhandle

Week Ending April 2

CARSON COUNTY

Company, well, farm name, section and block—	Remarks:
American Ref. Co.'s No. 11 Burnett, 745 ft. from E line, 802 ft. from S line, Sec. 115, Blk. 5, I.&G.N. Sur.	Location.
American Ref. Co.'s No. 12 Burnett, 1,145 ft. from E line, 802 ft. from S line, Sec. 115, Blk. 5, I.&G.N. Sur.	Location.

CHILDRESS COUNTY

Humble Oil & Ref. Co.'s No. 1 B. P. Smith, 1,327 ft. from S line and 1,327 ft. from E line of Sec. 27, H.&G.N. Sur., Blk. 9	Drlg. 140 ft.

DALLAM COUNTY

Eben Warner's No. 1 Jarbie, 1,520 ft. from S line, 415 ft. from W line, Sec. 2, B.&B. Sur.	Drlg. 3,000 ft.

GRAY COUNTY

Anderson & Bean's No. 3 J. C. Vollmert, 330 ft. from S line, 330 f.. from E line, SW Sec. 140, I.&G.N. Sur., Blk. 2	Cellar.
British American Oil Co.'s No. 5 J. L. Phillips, 1,320 ft. S, 330 ft. W of the NE cor. W½ E½ Sec. 127, Blk. 4, I.&G.N. Sur.	Testing; T.D. 3,273 ft.
British American Prod. Co.'s No. 6 Phillips, 1,259 ft. from S, 330 ft. from W lines of W½ E½ Sec. 127, Blk. 3, I.&G.N. Sur.	Drlg. 3,073 ft.
Cambrian Oil Co.'s No. 2 L. H. Webb, 990 ft. from N line, 330 ft. from E line of E½ NE Sec. 62, Blk. 25, H.&G.N. Sur.	Rig up.
Coleman et al's No. 1 W. B. Henry, 330 ft. from S line and 330 ft. from W line of E half SW Sec. 114, I.&G.N. Sur., Blk. 3	Drlg. 2,600 ft.
Continental Oil Co.'s No. 8 Finley-Brown, 990 ft. from E, 330 ft. from S line, Sec. 32, Blk. B-2, H.&G.N. Sur.	Moving in material.
Dixon Creek Oil Co.'s No. 1 D. W. Cary, 3,600 ft. from N line, 1,157 ft. from W line of Sec. 114, Blk. 3, I.&G.N. Sur.	Rig.
Dixon Creek Oil Co.'s No. 2 M. E. Jackson, 1,320 ft. S, 440 ft. W of the NE cor. SE Sec. 138, I.&G.N. Sur., Blk. 3	Set csg.; T.D. 3,000 ft.
Dyke Oil Co.'s No. 1 Saunders, NW cor. S½ NW Sec. 3, Blk. 1, B.S.&F. Sur.	Testing; T.D. 2,948 ft.
Empire Gas & Fuel Oil Co.'s No. 2-C W. C. Archer, 330 ft. from N line and 330 ft. from E line of N half of SW Sec. 139, I.&G.N. Sur., Blk. 3	Drlg. 2,620 ft.
Gulf Prod. Co.'s No. 5 Ellis Cockrell, 330 ft. from N and E lines, S½ Sec. 2, Blk. M-21, T.C.R.R. Sur.	Location.
Hendron et al's No. 1 Husselby, 330 ft. S and E, SW SW Sec. 11, Blk. A-9, H.&G.N. Sur.	Rig.
Magnolia Pet. Co.'s No. 1 Haggard, 330 ft. from S and W lines of NW Sec. 113, Blk. 3, I.&G.N. Sur.	Rig up standard tools; T.D. 3,076 ft.
Mazda-Shell's No. 4 Combs-Worley, 990 ft. from N line, 330 ft. from E line, Sec. 35, Blk. 3, I.&G.N. Sur...	Rig.
Phillips Pet. Co.'s No. 8 J. E. Wright, 330 ft. S, 992 ft. E of NW cor. N½ SW Sec. 13, I.&G.N.R.R. Sur., Blk. 3	Flowed 233 bbls. in 9 hrs.; T.D. 2,891 ft.
Phillips Pet. Co.'s No. 1 Faulkner, 330 ft. from N and W lines of SW Sec. 58, Blk. B-2, I.&G.N. Sur.	Sidetracking drill pipe; T.D. 2,660 ft.
Phillips Pet. Co.'s No. 3 Myson, 361 ft. from S, 376 ft. from E lines of W½ NW Sec. 87, Blk. 2-B, H.& G.N. Sur.	Rig up standard tools; T.D. 2,865 ft.
Reiger et al's No. 1 Furneaux Bros., C SE NW Sec. 99, Blk. B-2, H.&G.N. Sur.	Bldg. rig.
Skelly Oil Co.'s No. 1 R. W. Bailey, 540 ft. from S line and 575 ft. from W line of E 240 acres of N half of Sec. 42, H.&G.N. Sur., Blk. 25.....	Set csg.; T.D. 2,224 ft.
Skelly Oil Co.'s No. 9 Vicars, 330 ft. from S, 1,265 ft. from E lines of SW Sec. 127, Blk. 3, I.&G.N. Sur....	Swbd. 48 bbls.; put on pump; T.D. 3,290 ft.
Stanolind O. & G. Co.'s No. 2-C T. B. Cobb, 330 ft. from N and W lines of SE Sec. 165, Blk. 5, I.& G.N. Sur.	Set csg.; T.D. 2,697 ft.
Wilcox Oil & Gas Co.'s No. 25 Combs-Worley, 2,310 f.. from N line and 1,650 ft. from E line of W half of Sec. 35, I.&G.N. Sur., Blk. 3	Set csg.; T.D. 2,840 ft.

HUTCHINSON COUNTY

Huber Petroleum Co.'s No. 2-A J. F. Weatherly, 990 ft. from S line and 330 ft. from W line of E half SE Sec. 26, A.&B. Sur., Blk. Y	Rig.
J. R. Phillips et al's No. 1 Tom Lewis, 330 ft. S and W of the NE cor. NE Sec. 7, B.S.&F. Sur., Blk. M-23..	S.D. 2,004 ft.
Phillips Pet. Co.'s No. 1 Ludlum, 250 ft. from N and W lines of a square 50-ac. tract in NE cor. Sec. 3, Blk. M-21, T.C.R.R. Sur.	Drlg. 2,878 ft.
Harry Stekoll Oil Prod. Co.'s No. 2 F. Plemons Whittenburg, 330 ft. W, 1,650 ft. from N lines of 160 acres of the W½ Sec. 18, Blk. 47, H.&T.C. Sur.	C.O. 2,985 ft.
Tripplehorn Bros.' No. 3 R. C. Ware, 330 ft. from E line and 990 ft. from S line of E half NE Sec. 123, Blk. 4, I.&G.N. Sur.	Rig up.

KNOX COUNTY

C. C. Christie's No. 1 Moore, Sec. 87, Blk. 45, H.&T.C. Sur.	Location.

MOORE COUNTY

Phillips Pet. Co.'s No. 1 J. C. Wilson, Sec. 157, Blk. T-3, T.&N.O. Sur.	Location.

WHEELER COUNTY

H. R. Anderson's No. 1 R. L. Harlan, 330 ft. from N line, 330 ft. from E line of NW Sec. 49, H.&G.N. Sur., Blk. 24	T.D. 1,822 ft.
Mid-Continent Pet. Corp.'s No. 4 J. S. Carwile, 990 ft. from S line, 990 ft. from E line, Sec. 51, Blk. 24, H.&G.N. Sur.	Location.

Dumar Oil Co.'s No. 1 P. Ftak, C SE Sec. 99, Blk. 23, H.&G.N. Sur. ....Location.
Mid-Continent Pet. Corp.'s No. 5 J. S. Carwile, 990 ft. from N and W lines, NE Sec. 51, Blk. 24, H.&G.N. Sur. ....Location.
Myers & Kennedy's No. 1 Harvey, 660 ft. from S and E lines of NW Sec. 67, Blk. 13, H.&G.N. Sur. ....Drlg. 1,150 ft.
Parkhurst & Skrivin's No. 1 D'Spain, 330 ft. from N and E lines of E½ SW Sec. 52, Blk. 24, H.&T.C. Sur. ....Location.
Piney Oil & Gas Co.'s No. 1 A. Plummer, 990 ft. from N line and 330 ft. from E line of E half NE Sec. 45, H.&G.N. Sur., Blk. 24 ....Drlg. 1,980 ft.
Piney Oil Co.'s No. 1 Mankins, 330 ft. from S and E lines of W½ SE Sec. 54, Blk. 13, H.&G.N. Sur. ....Drlg. 2,010 ft.

Wildcat Operations in Southwest Texas

(Continued from Page 40)

C. Witherspoon's No. 1 Thos. Dillon, A. G. Mays Sur. ....Location.

BLANCO COUNTY

Rogers et al's (formerly Pedernales Pet. Corp.) No. 1 Lester, 550 ft. from N line, 6,100 ft. from W line of Antonio Bendrand Sur. ....Drlg. 1,215 ft.

BURLESON COUNTY

Brush & Hays' No. 1 C. W. Young, 150 ft. from SW line and 780 ft. from SE line of 140-ac. tract in Bird Sur. (7 mi. SE of Caldwell) ....T.D. 1,805 ft.; trying to sidetrack.

CALDWELL COUNTY

Adams & Lyles' No. 1 S. C. Cole, 330 ft. from W and 824 ft. from S line of lease, Tinney Sur. ....Set surface csg.
B. S. Cargill's No. 2 Damereau, 150 ft. from W line, 450 ft. from N line of D. Cooper Sur. ....Drlg. 1,650 ft. in shale.
Wilford Keen et al's No. 1 Wm. Ewalk, 150 ft. from E line and 150 ft. from N line of 126-ac. tract, or 3,650 ft. from N and 1,300 ft. from E lines of Jas. George Sur. (3½ mi. from Lockhart) ....Drlg. 845 ft.
Simmons' No. 1 W. H. Callahan, 1,500 ft. from W and 750 ft. from S lines of 176.6-ac. tract, Miller Sur. (6½ miles SE of Lockhart) ....S.D. 2,250 ft.; top Georgetown at 2,200 ft.
Webster Oil & Gas Co.'s No. 1 Robinson, 770 ft. S and E from NW cor. of 100-ac. tract in John A. Neill Sur. ..S.D. 2,290 ft.

CALHOUN COUNTY

J. Edward Mills et al's No. 1 Emma Johnson, 1,650 ft. from N line and 4,250 ft. from W line of Jas. Pinchback Sur. (6 mi. SE of Lockhart) ....Drlg. 497 ft.
Heep Oil Corp.'s No. 2 P. Welder, Day Land & Cattle Co., A-228, center of Sur., 2¾ mi. W of SW of McKinney, 650 ft. NW line and 3,950 ft. SW line of Sur. (4 mi. W of Clark) ....Rigging up.

COMAL COUNTY

Theo. Hicks et al's No. 1 Gruene, 435 ft. from NE line, 414 ft. from NW line of H. Foster Sur. No. 34, 3 mi. NE from New Braunfels ....Spudded and standing.

DEWITT COUNTY

Humble O. & R. Co.'s No. 1 Kuester, 4,100 ft. from N line, 466 ft. from E line of lease in S.A.&M.G. R.R. Sur. No. 7 ....Drlg. shale 4,779 ft.
Keystone Royalties' No. 1 L. T. Burns, 1,000 ft. from N and W lines of 265-ac. tract in McNutt Sur., Blk. 22 ....Location.

DUVAL COUNTY

Birdwell Oil Co.'s No. 1, Southerland Sur. No. 212 ....Estimated 20,000,000 ft. gas, 975 lbs. R.P.
Cecil Best's No. 1 Parr, 1,320 ft. from SE line and 990 ft. from NE line of Sur. 134 (10 miles W and 2 miles N of San Diego) ....Rigging up.
Buffalo-Texas Drlg. Synd., Inc.'s No. 1 Escobar, 700 varas from W line, 1,000 varas from N line of 930-ac. tract in Francisco grant ....Drlg. 1,400 ft.
Chiquita Oil Co.'s No. 1 Richardson, 330 ft. from N and E lines of Sec. 5 ....Drlg. 48 ft.
Clark & Cowden's No. 2 J. M. Richardson, 417 ft. from N line and 261 ft. from W line of Blk. No. 1, Sec. 3..Drlg. 1,703 ft.; 10-in. at 60 ft.
Continental Oil Co.'s No. 1 R. Driscoll Est., 180 ft. from S, 1,370 ft. from E lines of lease, Sec. 448 ..T.D. 2,299 ft.; sticky shale; set 10-in. at 678 ft.
Magnolia Pet. Co.'s No. 2 Tankersley, 330 ft. from N and E lines of SW SW Sur. No. 46 ....T.D. 2,310 ft.; pumping 150 bbls.
C. G. Mortimer's No. 1 W. R. Peters, 330 ft. from S line, 990 ft. from W line of NE Sur. No. 176 ....Drlg. 1,515 ft.
A. H. Richardson et al's No. 1 Drummond, 660 ft. from N and W lines of Sur. No. 392 (north central part of county) ....R.U.
Windsor Oil Co.'s No. 1 B. Peters, 100 ft. from S and 2,209 ft. from E lines of Sur. 34 ....S.D. 310 ft.
Witherspoon et al's No. 1, Richardson Sur. No. 5 ....Rigging up.
Louis Yeager's No. 1 fee ....Coring 917 ft.
Louis Yeager's No. 1 Yeager, 694 ft. from W line, 1,527 ft. from S line of Sur. No. 38 ....T.D. 865 ft.; testing.

EDWARDS COUNTY

Love and Evans' No. 1 Steve Brown, 660 ft. from N and E lines of Sec. 66, G.W.T.&P.R.R. Sur., 15 miles W of Rock Springs ....S.D. 3,002 ft.

FRIO COUNTY

Amerada Pet. Corp.'s No. 1 Frank Doering, 34 ft. from W line, 1,708 ft. from S line of Tract No. 7 in Marcia Louisa Carranza Sur. No. 302 ....T.D. 6,456 ft.; I.P. 2,000,000 ft. dry gas, comp.
Amerada Pet. Co.'s No. 2 Halff & Oppenheimer, begin. at most easterly N cor. of John H. Gibson Sur. No. 16, thence SE along NE line of Sur. 2,100 ft., thence SW at right angles 800 ft. (4 mi. SW of Pearsall) ..Location.
Humble O. & R. Co.'s No. 1 Woodward, 3,200 ft. from NE line, 1,200 ft. from SE line of 830-ac. tract in E. Poor Sur. ....T.D. 1,800 ft.; shale; fishing; junked and abd.
Humble Oil & Ref. Co.'s No. 2 Woodward ....Drlg. hard sand 823 ft.

GILLESPIE COUNTY

Powers et al's No. 2 Lindig, 12,700 ft. from S line, 1,333 ft. from W line of Maria Josephine Guerrera Sur. ....Location.

GUADALUPE COUNTY

A. F. Barnhill's No. 3 F. A. Phillman, 1,300 ft. from N line, 152 ft. from E line of lease in L. Bollinger Sur. ....Edwards, T.D. 2,452 ft.; tested S.W.
J. E. Clark et al's No. 1 Howell, 1,500 ft. S of road and 200 ft. from E line of tract ....Top chalk 715 ft.; top Eagleford S.S.O. 860 ft., top Buda 888 ft., top Del Rio 940 ft. and Edwards; S.D. 1,021 ft.
M. W. Elser's No. 2 Wells, 1,700 ft. from S line, 200 ft. from W line of Blk. 3, Subd. 1, J. de la Baume Sur. ....Location.
Adolph Seideman's No. 1 Seideman, 230 ft. from NE line, 470 ft. from NW line of Mrs. Adolph Seideman 147.5-ac. tract (Subd. 110) in Antonio Maria Esnaurriner Sur. No. 11 ....C.O. 2,524 ft.
Trinity Drillers' No. 1 Ball, 330 ft. from NE and SE lines of 91-ac. tract in L. H. Peters Sur ....Location.
L. E. Trout's No. 1 McKee, Green DeWitt Sur. ....Rigging up.

HAYS COUNTY

J. C. Crowder's No. 1 Burnett, 2,370 ft. from E line, 1,400 ft. from N line of tract in J. Ingram Sur. ....T.D. 430 ft.; set csg.; S.D.

HIDALGO COUNTY

D. D. Oil Co.'s No. 1 Mrs. L. George, 330 ft. from N and W lines of 40-ac. tract in Share 13, Porcion 41..Location.
Union Sulphur Co.'s No. 1 American Rio Grande L. & I. Co., 400 ft. S and W of NE cor. of Lot 229, Blk. 59 (½ mi. N of Mercedes) ....Set 13-in. csg. at 1,134 ft.; drlg. 1,150 ft.
Weekley Oil Corp.'s No. 1 Guerra, Porcion 41 ....T.D. 3,102 ft.; moving in machinery to deepen to 4,000 ft.

JIM HOGG COUNTY

Houston Oil Co.'s No. 5 Cartwright, 1,150 ft. from SW line and 1,775 ft. from SE line of J. M. Colchado Sur. ....Location.
A. W. Majors' No. 1 M. Guerra & Son, 2,444 ft. from W line, 3,698 ft. from N line of Sur. No. 369, in SW part of county ....Drlg. 2,205 ft.

JIM WELLS COUNTY

Plymouth Oil Co.'s No. 1 Cuero Cattle Co., 320 ft. from S and W lines of H.T.&B. Sur. No. 7, 2½ miles W from Alfred ....Rigging up.
Putnam and Bode's No. 1 McCarley, 600 ft. from SE line and 1,500 ft. from NE line of 300-ac. tract, Blk. A, of W. H. Bode Subdivision of Wallace D. Wade Ranch ....Derrick.
E. H. Robertson's No. 1 C. Mull, 330 ft. N of N end of division line between Lots 4-A and 5-A of Seefelds farm lots, or 1,300 ft. from W line, 300 ft. from N line of Pointevant Sur. No. 205 ....Heatly magnetometer location; S.D. 1,200 ft.

KARNES COUNTY

Campbell et al's No. 1 Ira Coats, 330 ft. from S and E lines of 260-ac. tract in Carlos Martinez Sur. ....Drlg. 2,881 ft.
Magnolia Pet. Co.'s No. 1 Scarborough, Eliz. Talley Sur., 330 ft. S and E from NW cor. of tract ....600 lbs. T.P., 800 lbs. C.P.; set 7-in. at 3,619 ft.; T.D. 3,639 ft.
George Ray's No. 1 Radford, 666 ft. from SW and 3,422 ft. from SE lines of 753-ac. tract in Nichols Sur. (4 miles NE of North Pettus Field) ....Rigging up.
C. J. Webster's No. 1 J. B. Cannon, 1,140 ft. from N line, 250 ft. from E line of 80-ac. tract in Lambrano Sur. ....T.D. 1,790 ft.; standing; may deepen to Yegua.

KENDALL COUNTY

Martin's No. 1 Houston, Thomas Leople Sur. No. 761 ....Top black shale 1,028 ft.; T.D. 1,985 ft.; to deepen.
A. P. Pierce's No. 1 Werner, in SW cor. of 40-ac. tract, 150 ft. from S and W lines of J. F. Torrey Sur. ....T.D. 992 ft.; standing.
W. E. Waldrip's No. 1 Charles Meckel, 300 ft. from E line, 8,300 ft. from S line of Thos. J. Sweeney Sur. No. 10 ....S.D. 515 ft.

KERR COUNTY

G. F. Schreiner's No. 3 Love, 1,420 ft. from W line, 1,260 ft. from S line of Sur. No. 1,594 ....Location.
Van Duyn & Moore's No. 1 Nowlin, 2,000 ft. from E line, 2,200 ft. from N line of Jas. R. Bettner Sur. No. 99 ....T.D. 1,040 ft.; standing.

KLEBERG COUNTY

J. S. Brown's No. 1 Antone Dietz, Sec. 7, Hotch estate ..Drlg. 1,935 ft.
Harry Clark's No. 1 V. J. Kivlin, 360 ft. from E line, 400 ft. from S line of Sec. 39, Blk. 8, Kleberg Town & Improvement Co. Sur. ....T.D. 2,350 ft.; reaming; S.O. 2,315-16 ft.; to test.

LASALLE COUNTY

G. O. Ball's No. 1 J. M. Martin, 330 ft. from S and W lines of Martin 435.6-ac. tract, Sur. 683 ....Moving in.

LEE COUNTY

Blackmar et al's No. 1 Beaty, William Nichols Sur. ....Location.
H. A. Sherlack's No. 1 Otto, 736 ft. from NW line, 1,310 ft. from NE line of 57.5-ac. tract in Thomas Morrow Sur. ....Rig up and S.D.

LIVE OAK COUNTY

Marine Oil Corp.'s No. 1 J. B. Dunning, 4,500 ft. from E line, 150 ft. from N line of 462-ac. tract in Maria Bridget Kiolin Sur. ....Sand 5,226-62 ft.; S.D.
Witherspoon Oil Co.'s No. 1 Clements, Elizabeth Jordan Sur., Blk. 15, 600 ft. from S line and 600 ft. from W line of 162-ac. tract ....T.P. 485 ft.; blew out and caught fire.

McMULLEN COUNTY

Bedwell's No. 1 Brown, Sur. No. 54 ....Drlg. 771 ft.
Cotulla's No. 1 Gordon, 330 ft. from N and W lines of S½ of Sec. 127 ....R.U.
Magnolia Pet. Co.'s No. 1 Kincaid, 8,800 ft. N of Nueces River and 466 ft. E of Sur. No. 199 ....Fishing 3,145 ft.
LeFevre & Spice's No. 2 Hagist, 2,970 ft. from E line and 1,650 ft. from S line of Sec. 17, Blk. 5, H.&T.C. Sur. ....Location.
C. C. Shumway's No. 4 Shiner, 320 ft. from W line, 660 ft. from N line of SE Sec. 38, Shumway's Subd., Shiner ranch ....D.S. test 1,548-85 ft. showed 3 jts. S.W., oil and mud; drlg. 1,785 ft.
Ike Taylor's No. 1 Wolfe, 330 ft. from N line and 330 ft. from E line of Sec. 81 ....Location.

MEDINA COUNTY

Humble O. & R. Co.'s No. 1 J. D. Dodson, 330 ft. from N and 660 ft. from W line of A. Kempf Sur. ....Drlg. lime 2,672 ft.; top Edwards 2,647 ft.
Scoggin & Sanders' No. 1 L. W. Burell, 150 ft. from E line, 1,750 ft. from N line of M. E. Gage Sur. No. 395 ....T.D. 425 ft.; S.D.

MILAM COUNTY

O. H. Birdwell's No. 1 J. R. Bartek, 150 ft. from N line, 180 ft. from W line of 88-ac. tract in J. A. de Pena Sur. ....S.D. 1,510 ft.
Marvel Wells' No. 1 fee, J. Liendo Sur. ....Top Austin 1,445 ft.; top Georgetown 2,175 ft.; drlg. 2,300 ft.

NUECES COUNTY

Clymore Oil Co.'s No. 1 Ingram, 660 ft. from N and E lines of Blk. No. 5, Sec. 6 ....Drlg. 1,800 ft.
Diadem Oil Co.'s No. 1 J. C. Mayo, 1,000 ft. along line from SE cor. in NW direction, thence due N 300 ft. (near Robstown), Sec. 23 ....Derrick.
Nuco Oil Co.'s No. 1 Synthia Bluntzer, Herrera Sur., 2,240 ft. from S line, 330 ft. from W line of 639.27-ac. tract ....Drlg. 600 ft.
Sullivan and Texon Royalty Co.'s No. 1 Simmons & Ferry, 330 ft. from S and W lines of NE of square 640-ac. section out of SW cor. of Simmons & Perry tract, 2 miles east of Agua Dulce Field ....Fishing 4,228 ft.

SAN PATRICIO COUNTY

Atkins & O'Neil's No. 1 Welder, 7,898 ft. from E and 317 ft. from S lines of Juan Hart & Sons and John Lucas Sur. (2 miles W of Angelita) ....Drlg. 2,770 ft.; coring 4,115 ft.
C. B. Bunte's No. 1 J. D. Holland, Sec. 26 of Eaton's Subd., 660 ft. from E and 1,320 ft. from N lines of lease (2 mi. SW of Sinton) ....Drlg. 2,876 ft.; tested 24 fpurbles S.W. with S.G. 2,846-74, top sand 2,830 ft.
Carpenter et al's No. 1 Sadler, 300 ft. each way out of SE cor. Blk. 1, Sec. 32, T. Peres Sur. ....R.U.
DeLange et al's No. 1 Sevier, 150 ft. N of S line, 7,650 ft. E of most southerly W line of Clara Driskol, Sevier, 7,045-ac. tract in Antonio Ramirez Sur., N of Premont area ....1,450 ft.; no report.
Diadem Oil Co.'s No. 1 J. C. Mayo, 300 ft. from S and 1,000 ft. from E line of Sec. 23, George H. Powell Subd. of the Driscoll ranch (S of Robstown) ....Location.
Plymouth Oil Co.'s No. 1 Welder, 4,700 ft. N of Chiltipin Creek, 900 ft. from W line of J. M. and F. Portilla Sur., 1½ miles N from Sinton ....Top Discorbis 4,100 ft.; drlg. 5,850 ft.

STARR COUNTY

Chas. H. Andrews et al's No. 1 A. Guerra, San Jose grant, 330 ft. from N and 150 ft. from E line of Sec. 6 (NE part of county) ....Spudding.

B. & B. Oil Co.'s No. 2 Kelsey Bass, 330 ft. from W and S lines of Blk. 12 of Subd. of Porcions 86 and 87, jurisdiction Camargo ..... Rigged up and S.D.

Dean Bros.' No. 1 M. M. Garcia, 2,150 ft. from S line, 4,600 ft. from W line of Sur. No. 916 ..... Location.

Goodwin & Yantis' No. 5 Kelsey Bass, 150 ft. from S and W lines of Blk. 1, Sur. 3, of Coastal O. & G. Co.'s Subd. of Porcion 86, jurisdiction Camargo .... T.D. 690 ft.; est. 15,000,000 to 20,000,000 ft. gas, 700 lbs. pressure.

Goodwin-Yantis' No. 4-A Kelsey Bass, 1,300 ft. NW of No. 3 in Porcions 86 and 87, Ancient Jurisdiction of Camargo ..... Location.

Great Plains Oil Co.'s No. 1 Sanchez, 660 ft. from W line, 330 ft. from S line of SE NW of Sur. No. 344 .. T.D. 3,517 ft.; preparing to resume drlg.; 879-87 ft. sand S.O. and G. 997 ft.; bailed S.O. and S.W.; D.S. test 2,579-91, 2 jts. mud. S.D.

Jeffries-Lambeth Drlg. Co.'s No. 2 Starr County Cattle Co., N of No. 1 in Share 60, Porcion 89 ..... T.D. 2,519 ft.; sand 2,505-18 ft.; D.S. test 2,490-2,510 ft.; 4 thribbles fluid showing oil.

W. H. Liber's No. 1 I. Y. Garcia, 1,546 ft. from N line, 962 ft. from W line of 254-ac. tract in Porcion No. 75, jurisdiction of Camargo ..... Drlg. 1,040 ft.

Myers, Sullivan & Jenkins' No. 1 Starr County Cattle Co., 330 ft. from N line, 330 ft. from W line, Blk. 62, Porcion 89, Share 60 ..... T.D. 2,520 ft.; preparing to start up.

R. D. Perkins & Hoffman's No. 1 E. A. Peffler, 3,090 ft. from W line, 2,480 ft. from S line of Sur. 933 .... T.D. 1,547 ft.; S.D.

TRAVIS COUNTY

Sioux Oil Co.'s No. 5 Goodrich, Por. 81 ..... Rigging up.

UVALDE COUNTY

Evans & Johnson's No. 1 Farris, J Hammons Sur. ..... Drlg. shale 510 ft.; S.D.

T. T. Word et al's No. 1 K. S. Truelove, 650 ft. from N line and 3,000 ft. from E line of Daniel Elam Sur. No. 651 (7½ mi. NW of Sabinal) ..... Rigging up.

WEBB COUNTY

L. E. Lockhart's No. 1 E. Eikel, 330 ft. from N line, 260 ft. from E line of Sur. No. 1,672 ..... Drlg. 825 ft.

Don E. Megahan et al's No. 1 F. C. Gowdy, 330 ft. from E line, 1,450 ft. from N line of Sur. No. 2,112.. Drlg. 3,015 ft.

Shankel et al's No. 1 Saldivar, Sur. 652 of J. V. Borrego grant ..... R.U.

Weekley Oil Corp.'s No. 1 R. Salvidor, 1,269 ft. from E line and 243 ft. from N line of Sec. 657, Borrego grant (SE part of county) ..... Rigging up.

WILSON COUNTY

Bidnar & Powell's No. 1 L. C. George, 400 ft. from SE line, 475 ft. from SW line of 86.5-ac. tract in C. Diaz Sur. No. 44 ..... T.D. 1,536 ft.; S.D.

Pfiel & Vogel's No. 1 Gutzeit, Flores grant, 150 ft. N of road and 150 ft. from W line of farm, 7 mi. NW of Floresville ..... Drlg. 610 ft.

J. C. Yancey's No. 1 Lissy, D. J. Holt Sur., 1,700 ft. from SE and 6,500 ft. from most westerly SW cor. of survey ..... Spudded and S.D.

WILLIAMSON COUNTY

Atlantic-Pacific Corp.'s No. 1 W. C. Daniel, 500 ft. from SW line, 2,100 ft. from SE line of Washington P. Reese Sur. No. 3 ..... Drlg. 570 ft.

McLean et al's No. 2 R. C. Miller, 800 ft. to S line, 100 ft. to W line of tract, B. Manlove Sur. ..... T.D. 2,300 ft.; U.R. 2,297 ft.; C.O.

G. L. Rowsey, trustee's No. 3 Brochmeyer, 150 ft. out of SW cor. of N 30 acres or 3,400 ft. from SE line and 910 ft. from SW line of H. White Sur. ..... Spud.

G. L. Rowsey, trustee's No. 2 John Rieger, 4,450 ft. from SE line and 150 ft. from SW line of H. White Sur. ..... Location.

R. S. Wilson's No. 2 Sing, 300 ft. from SW line, 1,250 ft. from SE line of T. A. Moore Sur. ..... T.D. 530 ft.; washing.

ZAPATA COUNTY

O. W. Killam's No. 7 Bruni, Blk. 53, O. W. Killam Subd. of Share Z-8 of Blas Uribe tract in San Ignacio Subd. of J. V. Borrego grant ..... T.D. 1,835 ft.; comp. 30,000,000 ft. gas, 700 lbs. R.P.

Muckelroy's No. 1 Flores, on NE line and 75 ft. from SE line of Lot 2, Blk. 30, Muckelroy Subd. of Porcion No. 37 ..... Derrick.

Kliener & Hill's No. 8 Gutierrea, Share 4, Comitas grant.. Rigging up.

Southwest Texas Proven Areas

Week Ending March 31

CEDAR CREEK POOL—BASTROP COUNTY

C. H. Herbig et al's No. 1 H. R. Smith (Sallie Voss), A. Lytton Sur., 150 ft. from S line and 750 ft. from W line of 50-ac. tract or 5,000 ft. SW line and 750 ft. NW line of Sur. ..... Drlg. 800 ft.

Marts & Bevins' No. 3 Orgain, Addison Litton Sur. .... Location.

NORTH DALE POOL—BASTROP COUNTY

Chiquita Oil Co.'s No. 1 A. H. Hanna, Joshua Gray Sur. ..... Top lime 2,198 ft.; Serp. 2,242-86 ft.; washing to bottom to set csg and test; T.D. 2,330 ft.

Marts & Bevins' No. 4-A C. L. Riddle, John Maxmillan Sur. ..... Coring 2,302 ft., top chalk 2,190-93 ft., drlg. Serpentine 2,193-97 ft., chalk, odor oil, 2,197-2,211 ft.

Ogden & Reed Oil Co.'s No. 1-A C. L. Riddle, John Maxmillan Sur. ..... Coring 2,104 ft.

Watt L. Saunders' No. 1 Harris, 1,100 ft. from SW line, 2,830 ft. from NW line of John Maximillan Sur. No. 22 ..... Drlg. 1,605 ft.

Witherspoon Oil Co.'s No. 1 A. H. Harris, 150 ft. from SE and SW lines of Harris 180-ac. tract in Joshua Gray Sur. ..... Spudded in.

ECKERT POOL—BEXAR COUNTY

Alamo Nat. Gas Co.'s No. 2 Coreth, 300 ft. SE of Humble's No. 2 Coreth in A. Stafford Sur. ..... T.D. 1,055 ft.; set 6⅝-in. csg.; S.D.

J. F. Harrison's No. 4 F. Gembler, 150 ft. from NW line, 460 ft. from NE line of 88-ac. tract in J. Montez Sur. ..... T.D. 831 ft.; S.D.

S. J. Moore's No. 5 T. W. Masterson, 150 ft. from S line, 175 ft. from W line of 41-ac. tract in Miguel Gortaris Sur. ..... T.D. 736 ft.; 6⅝-in. csg.

S. J. Moore's No. 4 T. W. Masterson, 150 ft. from S and W lines of tract in M. Cartari Sur. ..... T.D. 330 ft.; S.D.

VON ORMY POOL—BEXAR COUNTY

Von Ormy Oil Co.'s No. 2 E. B. Carruth, 515 ft. from W line, 1,970 ft. from S line of 160-ac. tract out of 657-ac. tract in F. Rolen Sur. ..... Rigged up and standing; to be drilled by Cosby & Flowers.

SLICK POOL—DEWITT COUNTY

Slick-Seeligson Corp.'s No. 3 Poetter, 2,340 ft. from SW line and 1,320 ft. from SE line of lease on 591-ac. tract in Marshall County ..... R.U.

EAGLE HILL POOL—DUVAL COUNTY

Al Buchanan's No. 5 Duval County Ranch Co., 990 ft. from E line, 330 ft. from S line of N½ of Sur. No. 206 ..... T.D. 101 ft.; S.D.

R. D. Kelley's (S.R.C.) No. 5 Foster, 330 ft. from S and W lines of 50-ac. tract in Sur. No. 206 ..... Sand 2,151 ft.; tested S.W.; P.B. 2,146 ft.; comp. 2 bbls. hr. approx.; 40 per cent salt water through ⅝-in. choke.

Al Buchanan's No. 6 Duval County Ranch, 660 ft. E of No. 1, Sec. 206 ..... Derrick.

Al Buchanan's No. 4 Duval County Ranch Co., 990 ft. from S line, 2,310 ft. from E line of N½ Sur. 206.. T.D. 100 ft.; abnd.

EAST COLE POOL—DUVAL COUNTY

Motes-Campbell's No. 1 Bruni, 150 ft. from NE and SE lines of Sec. 493, Myrtle E. Hale Subd., Mariano Arispe grant ..... Drlg. 2,624 ft.

GOVERNMENT WELLS POOL—DUVAL COUNTY

Cappa & Smith's No. 6-A Duval County Ranch, 1,430 ft. from SE and 330 ft. from SW lines of SW Sur. No. 574 ..... T.D. 2,435 ft.; sand 2,403-25 ft., sand 2,381-97 ft.; Cole sand 1,745-70 ft.

Cox & Hamon's No. 6 State, 990 ft. from N and 170 ft. from E line of NW SW of Sur. No. 60, or 660 ft. S of No. 5 ..... Rigging up.

Humble Oil & Ref. Co.'s No. 19 Paul White, Sec. 58, 4,290 ft. S and 990 ft. N lines of Sec. 58 ..... Comp. 25 bbls. hr.

Humble Oil & Ref. Co.'s No. 20 Paul White, 2,790 ft. from S and 990 ft. from W line of Sur. No. 58 .... Location.

K. O. T. Oil Co.'s No. 3 Lundell, 1,470 ft. from S line, 1,170 ft. from W line of Sur. No. 48 ..... S.D. 2,280 ft.

Magnolia Pet. Co.'s No. 21 Duval County Ranch, 660 ft. E of No. 14 and 660 ft. N of No. 10 on 960-ac. tract in Sec. 208, J. Poitevent Sur. ..... Rigging up.

Magnolia Pet. Co.'s No. 23 Duval County Ranch, 1,650 ft. from S line and 330 ft. from W line of Sur. No. 209, or 660 ft. N of No. 22 ..... Drlg. 120 ft.

Magnolia Pet. Co.'s No. 6 J. T. Johnson, 750 ft. from N line, 330 ft. from W line of SW Sur. No. 44 ..... Pumping 150 bbls. per day.

McKay & Reed's No. 2 State, 330 ft. from S and E lines of S half NW Sur. No. 60 ..... T.D. 1,565 ft.; comp. 1,500 bbls.

Reynosa Oil Co.'s No. 5-B Duval County Ranch, 330 ft. from S line and 990 ft. from E line of SE Sur. No. 363 ..... Comp. 150 bbls. day.

Reynosa Oil Co.'s No. 6-B Duval County Ranch, 660 ft. N of No. 5-B, Sur. No. 363 ..... Location.

Russ et al's No. 5 Hahl, 330 ft. from N and W lines of NW of SW Sur. No. 46 ..... Drlg. 1,550 ft.

Sun Oil Co.'s No. 39 Weiderkehr, 681 ft. W of No. 24 in Poitevent Sur. No. 359 ..... Comp. 2 bbls. per hr.

Sun Oil Co.'s No. 43 Weiderkehr, 673 ft. S of No. 42 well. Comp. 2 bbls. per hr.

Sun Oil Co.'s No. 33 Weiderkehr, 330 ft. from S line, 990 ft. from E line of Sur. No. 359 ..... Location.

Sun Oil Co.'s No. 29 Weiderkehr, 1,650 ft. from W line, 330 ft. from N line of Sur. No. 359 ..... T.D. 2,306 ft.; running tubing.

Sun Oil Co.'s No. 44 Weiderkehr, 660 ft. S of No. 43, Sur. No. 359 ..... Drlg. 1,760 ft.

Sun Oil Co.'s No. 45 Weiderkehr, 660 ft. S of No. 32, Sur. No. 359 ..... Drlg. 2,035 ft.; W.O.C.; set. 10-in. at 36 ft.

Sun Oil Co.'s No. 46 Weiderkehr, 660 ft. S of No. 45, Sur. No. 359 ..... Comp. 22 bbls. per hr.

Sun Oil Co.'s No. 47 Weiderkehr, 660 ft. S of No. 46, Sur. No. 359 ..... Drlg. 1,815 ft.

Sun Oil Co.'s No. 48 Weiderkehr, 660 ft. S of No. 47, Sec. 359 ..... Location.

Sun Oil Co.'s No. 49 Weiderkehr, 660 ft. S of No. 48, Sec. 359 ..... Location.

Sun Oil Co.'s No. 50 Weiderkehr, 660 ft. S of No. 49, Sec. 359 ..... Location.

Sun Oil Co.'s No. 51 Weiderkehr, 660 ft. W of No. 12 ... Rigging up.

Texas Co.'s No. 5 fee, Sur. 362 ..... Set 7-in. 2,288 ft.; W.O.C.

Texas Co.'s No. 7 Duval County Ranch fee, 1,650 ft. S and 330 ft. E of NW cor. SE Sec. 362, J. Poitevent Sur. ..... Rigging up; elev. 518 ft.

Trapshooter Reilly's No. 1-B C. W. Hahl, 200 ft. from W line, 330 ft. from S line of Blk. 26, Sur. 250 .... Location.

KINGSVILLE POOL—KLEBERG COUNTY

Ryals & Bartlett's No. 1 Flato, 150 ft. from N line, 30 ft. from W line of NE SE Sec. 40, of Kleberg Town & Improvement Co. Sur. ..... R.U. and S.D.

JACOB POOL—McMULLEN COUNTY

C. R. Kennon's No. 1 Lark, 810 ft. from W line, 150 ft. from N line of 20-ac. tract, Blk. 27, Scrugham Sur. ..... W.O.C. 729 ft.

Loma Oil Co.'s No. 18 Jacob ..... T.D. 1,002 ft.; testing.

Loma Oil Co.'s No. 23 Jacob, 660 ft. S of No. 11, 330 ft. from E line of lease, Sur. No. 7 ..... T.D. 1,003 ft.; S.D.

Loma Oil Co.'s No. 24 Jacob, 660 ft. E of No. 22, Sur. 7.. T.D. 1,057 ft.; S.D.; sand 1,046-57 ft.; set 7-in. at 1,040 ft.

Texio Oil Co.'s No. 1 Jacob, 4,633 ft. S and 330 ft. W of SW cor. of Sec. 7, G.H.&H. Sur. ..... Rigging up.

CUEVITAS POOL—STARR COUNTY

Sun Oil Co.'s No. 5-B M. Guerra, 1,650 ft. out of NE cor. of "B" lease in La Sacatosa grant ..... Drlg. 1,050 ft.

Sun Oil Co.'s No. 5-C M. Guerra & Son, 1,320 ft. NE of No. 4-C La Sacatosa grant ..... Location.

Sun Oil Co.'s No. 1-D Guerra, 6,352 ft. from NE line, 3,300 ft. from SE line of La Sacatosa grant ..... Abnd.

AGUA DULCE—NUECES COUNTY

Camp et al's No. 2 King, 990 ft. S of N line, 330 ft. W of E line of Sec. 24, R. Garza Sur. ..... Drlg. 3,988 ft.; sandy shale, no show 3,910-74 ft.; top sand 4,045; preparing to make D.S. test.

Garland Clymore's No. 2 Ollie Purl ..... D.S. test 4,893-4,900 ft., showed 100 ft. S.W.; drlg. ahead.

SAXET FIELD—NUECES COUNTY

South Mineral Oil Co.'s No. 1 J. W. Page, E. Villareal Sur., 471 ft. from E line, 160 ft. from S line of 150-ac. tract ..... T.D. 4,079, 4,073-79, D.S. test 5 bbls. oil, 75 lbs. W.P. through ¼-in. choke 5 min.; running csg.

United Prod. Co.'s No. 3 Ollie Purl, Peters Subd. No. 2, Sec. 6, Blk. 3, C of Blk. 3 ..... Drlg. 4,356 ft.

LOS OLMOS POOL—STARR COUNTY

Los Olmos O. & G. Co.'s No. 57 Kelsey Bass, 150 ft. from N line, 568 ft. from W line of SE SW Sec. 6, Porcions 75, 76 and 77 ..... T.D. 640 ft.; standing; depth corrected.

LAUREL POOL—WEBB COUNTY

South Texas Oil Co.'s No. 11 Laurel, 200 ft. from W line and 150 ft. from S line of Blk. 4, Sur. 270 ..... Coring 1,745 ft.

WEST COLE POOL—WEBB COUNTY

Magnolia Pet. Co.'s No. 2 Benavides, Blk. 4, Sur. No. 697.. T.D. 2,329 ft.; comp. pumping 35 bbls. oil dly.

BYERSVILLE POOL—WILLIAMSON COUNTY

Otto Stolley's No. 1 Charles L. Byer, beginning at SE cor. of P. Cartwright Sur. SW 4,700 ft. along survey line then 950 ft. SE at right angles in P. Stoddard Sur. ..... T.D. 1,020 ft.; fishing.

ESCOBAS POOL—ZAPATA COUNTY

Texas Co.'s No. 39 Whitehead, on Serrito Blanco grant.. T.D. 1,219 ft.; comp. spraying oil and making 10,000,000 ft. gas daily.

W. E. West and J. P. Perry's No. 1 Garcia, 1,200 ft. from NW line, 200 ft. from NE line of Share 2 of Comitas grant ..... Dry and abnd. 1,735 ft.

JENNINGS POOL—ZAPATA COUNTY

Texas Co.'s No. 44 Measles, 395 ft. S. 77° 33 min. E of No. 39 Cerrito Blanco grant ..... Set. 10-in. at 44 ft.; drlg. 414 ft.

MARTINEZ POOL—ZAPATA COUNTY

W. R. Shankle and Wm. McGinley's No. 2 Manuel Trevino heirs, 330 ft. from W line, 150 ft. from S line of Blk. 15, Sur. No. 411 ..... Comp. 20,000,000 ft. gas.

MIRANDO VALLEY POOL—ZAPATA COUNTY

O. W. Killam's No. 2 Hinnant, 710 ft. NW line and 175 ft. SW line of Blk. 1, Sur. 10 ..... Drlg. 1,200 ft.

VILLA POOL—ZAPATA COUNTY

Danvers & Harrison's No. 1 Garza, 330 ft. from SE and NE lines of Blk. 102, Douglas Subd., Comitas grant.. T.D. 2,305 ft.; abnd.

Construction Details Need to Be Considered in Choosing Suitable Centrifugal Hot Oil Pump

By MICHAEL D. AISENSTEIN
Chief Engineer, United Iron Works, Oakland, Calif.

The purpose of this article is to discuss centrifugal hot oil pumps with particular reference to the high-pressure hot oil type for charging. By hot oil pump is generally understood a pump operating at a temperature over 400° F.

Multistage pumps are made of the so-called back to back volute design, or of series spider type. The former is used more in the United States; the latter in Europe. Each design found its application in the high-pressure multistage hot oil pump in this country. For capacities up to 500 gallons per minute, for relatively low specific speed, up to N_s=1,100, multistage pumps, the writer found the difference in efficiency when using the same impellers in volute cases against spider series cases to be approximately 3 to 4 points. It is believed that efficiency will be still lower for high specific speed pumps when using spider cases against volutes. The sudden enlargement losses at the tip of the impeller port and entrance of the spider case together with necessity to accelerate the liquid from relatively large spider area at the discharge to relatively small area at the suction all contribute to lower efficiency of higher specific speed pump.

Series Spider Type

From a manufacturing point of view, the series spider type of pump is more desirable, since for a given size and design one pattern could be used for different number of stages as conditions may require, whereas with volute type of pump for every number of stages a complete independent pattern has to be provided.

The efficiency of a series spider pump could be improved somewhat by the use of diffusors which would lead liquid from impellers into the spiders. This would increase considerably the outer diameter of the pump, which is very objectionable for obvious reasons when dealing with high-pressure and temperature and would add materially to the cost and complicacy of the pump.

Due to high temperatures, the metals as well as the inner and outer casings expand in varied amounts. It is very important that provision be made that would prevent any and all possibility of the expansion of the metals from forcing the drive shaft out of alignment or from interfering with the proper operation of the working parts in any manner.

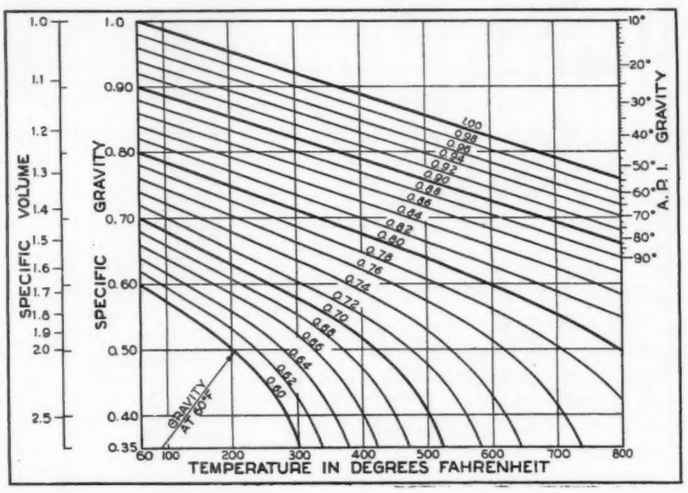


Fig. 1—Gravity-temperature relationship for petroleum oils. Data by W. P. Eckart

Allowing for Expansion

We shall explain how it is possible to take care of expansion. The problems are as follows:

1. To prevent the metal of the inner casing and outer casing to expand and contract longitudinally without danger of breakage of casings when the parts expand; or danger of leakage when parts contract or expand as the result of different temperatures.

2. To prevent the pump getting out of alignment due to difference in expansion of the outer casing and due to difference in temperature between the pump and prime mover.

For determining expansion of different parts, the table by Norman L. Mochel, "Symposium on Effect of Temperature on the Properties of Metals," will be found very valuable. The tensile and compressive stress set up by a temperature change of T degrees may be determined by formula:

$$P = KEAT$$

Where:

K = mean coefficient of linear expansion.
E = modulus of elasticity (average for steel 30,000,000).
A = sectional area of the material in square inches.
T = the temperature change in degrees F.
P = force in pounds.

In determining the thickness to be used for the outer barrel, as well as of the inner barrel, at different pressures and for different temperatures not exceeding 750° F., for steel, the following formula is to be used for barrels having nominal diameter over 5 inches.

$$P = \frac{2s}{D} \times (t - 0.1)$$

Where:

P = working pressure, lbs. per sq. in.
T = thickness of wall of barrel, inches.
D = actual outside diameter of barrel, inches.
S = stress in lbs. per sq. in. The value of "s" depends on grade of steel.

This equation is recommended by A.S.M.E. boiler construction code for pipes and can be used safely for computing the walls of hot oil pump barrels.

The wall of the casing can be approximated to a circular plate with a circular hole in center, subjected to bending by a uniformly distributed load. The outer diameter of this circular plate is taken equal to the diameter of the tangent circle of the volute casing.

When starting the pump the thin impellers and their hubs heat up more rapidly than the shaft. With standard mounting of impellers for a relatively long span where impellers and spacers are located by means of two threaded shaft sleeves due to unequal expansion of impellers with spacers and shaft, the shaft will be strained unless all parts heat up equally with the result that the

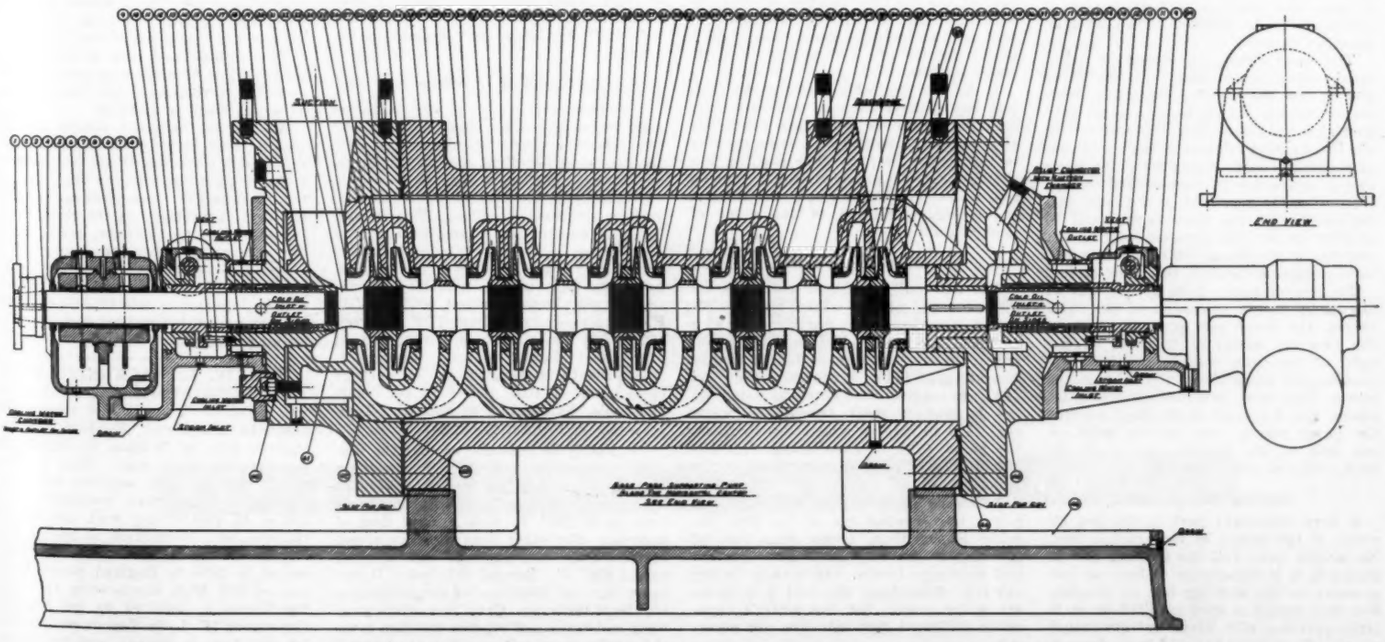


Fig. 2—Detail in the construction of a 10-stage centrifugal hot oil pump for refinery use

shaft will warp out of shape. The warping of the shaft at relatively high speeds will cause the pump to vibrate. This can be remedied by having two impellers screwed up (patent pending; patent applied for) on the shaft with threads cut in such a manner that they would tighten with rotation.

The relative expansion of the inner and outer casing of the pump goes through two phases—first, the starting, and second, the running cycle.

When hot oil is admitted to a cold pump the inner pump casing is heated more rapidly than the outer barrel and consequently expands much faster than the latter and reaches its final "hot lengths" before the outer casing does. As the whole pump attains working temperature, the outer casing, though it never attains the same temperature as the inner casing, continues to expand long after the inner casing reaches its final length. This illustrates the importance of having only one sealed joint between the inner and outer casings from which the expansion should take place.

Charging Pump

The charge pump for pressures over 400 pounds per square inch is of the so-called double barrel construction. The shaft (22) is provided with replaceable hard sleeves (20) and (37) and is supported in bearings (39) and (5). The pump has a cylindrical outer casing without split made out of forged steel with a circular cover plate on both ends for strength and tightness, which encloses an inner casing containing the hydraulic passages. The sole purpose of the outer casing is to prevent any possible flashing of hot oil at any point of horizontal parting surface of the inner casing when subject to relatively high pressure and temperature. Only few cylindrical tongue and groove joints are employed which can be made tight at high temperature and pressure.

The volutes or spiders surrounding the impellers are made in the form of an inner casing which can be withdrawn from the outer casing with the shaft and impeller assembly upon the removal of the outer casing and cover.

The inner casing consists of a center section split horizontally.

From Figure 2 it can be seen that the inner case is held tight against its seat in the outer casing by means of studs (A) which are screwed into the inner casing and drawn up against the outer casing. Special enclosures cover the studs and nuts.

This construction allows the inner casing to expand freely longitudinally from the face (42) without having a tendency to open the joint or without danger of breakage due to stresses set up by temperature change.

The axial clearances should be calculated, using tables and formulas given above; and the wearing rings and other metal surfaces should be such as to have provision for longitudinal movement with the inner casing relative to shaft and runners and the outer casing when the inner casing moves due to temperature change. Naturally, the expansion of the inner casing relative to the outer casing will be greatest at the high-pressure stuffing box and zero at the flange (42), which is held tight against its seat in the outer casing.

To prevent pump from getting out of alignment due to expansion of the outer casing, the outer casing is mounted on the base by means of brackets on the sides of the outer casing at a level approximately along the center line of the pump. Two keys provided on the outer casing and keyways in the base prevent the pump casing from moving more on one side of the vertical center of the pump than on the other side.

Stuffing Box Design

A very important part of the hot oil pump is the design of the stuffing box. No matter how well the stuffing box is designed, it is imperative to have as low pressure on the stuffing box as possible. For this reason a steel stellited drum is often provided with diametral clearances ranging from 0.012 to 0.018 inch, depending on the diameter of the drum. Oil passes from high-pressure chamber into the equalizing chamber and is led away back to the suction through a relief pipe (F). The relief pipe is proportioned in such a manner as to keep the pressure head due to frictional resistance and velocity head at a minimum. As a rule a 1½ to 2-inch by-pass opening is adequate.

The experiments with relatively narrow running joint indicated that the axial width of the running joint had little effect on the co-efficient of discharge. But with a relatively long running joint the co-efficient of discharge drops with length and increases with pressure. Figure 3 shows the co-efficient of discharge and leakage for two drums at various pressures of water.

In high-pressure hot oil pumps it is difficult to pack the stuffing box where

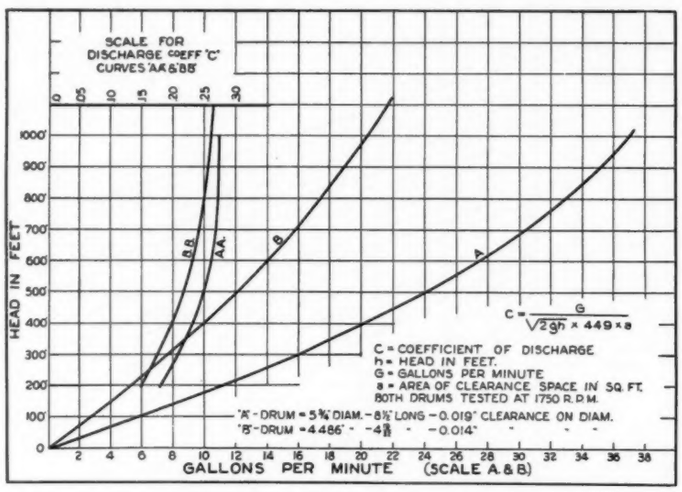

SCALE FOR DISCHARGE COEFF 'C' CURVES 'AA & BB'
0 05 10 15 20 25 30
HEAD IN FEET
1000' 900' 800' 700' 600' 500' 400' 300' 200' 100' 0
BB
AA
B
A
C = G / √2gh × 449 × a
C = COEFFICIENT OF DISCHARGE
h = HEAD IN FEET.
G = GALLONS PER MINUTE
a = AREA OF CLEARANCE SPACE IN SQ. FT.
BOTH DRUMS TESTED AT 1750 R.P.M.
'A' - DRUM = 5⅝" DIAM. - 8½" LONG - 0.019" CLEARANCE ON DIAM.
'B' - DRUM = 4.486" - 4⅛" - - 0.014" " - -
2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38
GALLONS PER MINUTE (SCALE A & B)

Fig. 3—Relationship between head and volume of liquid pump delivers

the shaft enters the pump in such a manner as to positively prevent any leakage of hot gas and oil. The object of a correctly designed hot oil stuffing box is to provide means to confine the flame caused by the hot oil flashing and thus reduce the danger, and to provide means that will reduce the temperature of any escaping hot oil or gas that leaks past the packing.

Cold oil or water is pumped in a very small quantity to the lantern ring (19) at a pressure slightly higher than the suction pressure. This serves several purposes; first, it quenches the temperature of the oil that escapes through the stuffing box; second, it lubricates the packing and cools the shaft sleeves (21), increasing its life and ability to withstand abrasion.

It is very desirable to have the stuffing box entirely enclosed and externally operated so as to avoid any possibility of blowing the hot oil and worn packing in the operator's face. The stuffing box chamber may be provided with a vent on top, a drain on the bottom, and a steam smothering connection in the event of flashes of oil vapor.

Gland Mechanism

The externally operated gland mechanism consists of two gland halves (12) bolted together and provided with a threaded extension. This extension engages the internal threads in the hub of a worm gear (11). When the handwheel (15) is turned, the worm mounted on the handwheel shaft causes the worm gear (11) to revolve, which in turn causes the gland (12) to slide in or out. The gland (12) is kept from rotating by the guide rod (14).

As to the other features of the hot oil pump, the impeller eye of the first impeller is sometimes larger than that of the rest of the impellers. Both suction and discharge nozzles are usually facing upward. Sometimes the cast iron bases are water cooled, but the writer's experience indicated that this was not necessary.

For extremely high pressures (400 pounds up) and temperatures (450° to 750° F.) double case pumps should be used. The outer casing should be made preferably out of steel forging. If the oil is very corrosive, the outer case may be lined by welding a layer of stainless steel. The inner casing may be cast of low carbon cast steel, or chrome steel if the oil is corrosive. An alloy consisting of a 4 to 6 per cent chrome steel is often used for this purpose. For severe service condition, chromium nickel alloys with 11 to 30 per cent chromium and 7 to 20 per cent nickel may be used. The most common practice is the 4 to 6 per cent chromium steel. The 4 to 6 per cent chrome steel has corrosion resistance of about five times that of plain carbon steel and is much cheaper than the high-priced 18 per cent chromium 8 per cent nickel stainless steels. The carbon content should be kept as low as possible, since the lesser the amount of carbon the lesser will be the combination with chromium in the form of chromium carbides, and, consequently, the greater will be the corrosion resistance.

In general, commercial grade of 4 to 6 per cent chrome steel should have about .15 to .25 per cent carbon and should not be over .30 per cent. Higher content of carbon decreases the machinability and offers difficulty in welding. This steel should be annealed for machinability and should be heated to about 1,400° F.; held at this temperature for three to four hours and then cooled slowly in still air to 1,110° F.; then more rapidly if desired.

Design of Impellers

Impellers are made of the stainless steel or of the same steel as the inner case. It was found by the writer that the cast steel impellers, due to roughness, are always inferior, as far as hydraulic characteristics are concerned, to the cast iron or semisteel impellers. This is particularly pronounced in small sizes. For this reason semisteel gray iron, chrome nickel gray iron impellers were designed, and they gave very satisfactory service for hot oil pumps of about 600° to 650° F. For temperatures above 750° F., creep stress are important and chrome nickel alloy steel should be used throughout. The strength is designed for an average creep rate of 0.01 per cent per year. (Bolton's "Symposium on Effect of Temperature on Properties of Metals.")

"It should be remembered that the limiting temperature of 450° F. for gray cast iron is only for pressure vessels. (Writer used impellers made of cast iron up to 700° F. with a great deal of success.) For other than pressure vessel service, gray iron castings can be used up to 800° F. Beyond this point it appears that the likelihood of graphitization will limit their use. Gray iron offers good wear resistance and relative freedom from the tendency to gall or seize at elevated temperatures when run even on cast iron. Addition of 15 to 20 per cent scrap steel improves its properties."

Construction of Shaft

High-speed shafts, such as are used with high-speed hot oil centrifugal pumps, are designed mainly for critical speed. It is evident that the shaft span of a charging hot oil pump, due to the large number of stages, is great and the torque is relatively small on account of the large number of revolutions; consequently, if the shaft is designed to operate under the first critical speed, it always will be strong enough for combined torsion and bending. The critical speed is determined usually both graphically and numerically, using the well-known equation:

$$N = \frac{N_a \cdot N_b \cdot N_c}{\sqrt{N_b^2 \cdot N_c^2 + N_c^2 \cdot N_a^2 + N_a^2 \cdot N_b^2}}$$

Where:

N = first critical speed of the system.

N_a = first critical speed of unloaded shaft.

N_b N_c = first critical speed of each separate load.

To obtain any degree of accuracy when figuring the first critical speed of shaft, the stiffening effect of the hubs of the impeller and the dampening effect of the stuffing box would be necessary to calculate. Since it is desirable that the pump should operate below the first critical speed, neglecting the stiffening effect of the hubs, sleeves and stuffing boxes will bring the designer on the safe side. The selection of the shaft material and the proper heat treatment is very important. The shaft must be free of strains when in operation, since the heat may bring it out of shape if it had any strains. Shaft steel material forged of such as S.A.E. 6,100 series and properly heat treated gives good results. The deflection of the shaft should always be less than radial clearances between wearing rings and other close fitted running surfaces.

It is important to have each rotating part balanced statically and dynamically, separately; and, if possible, as a unit.

After the rotating element is completely assembled it should be checked for trueness, since it is very possible to have strains which may run the shaft out of true.

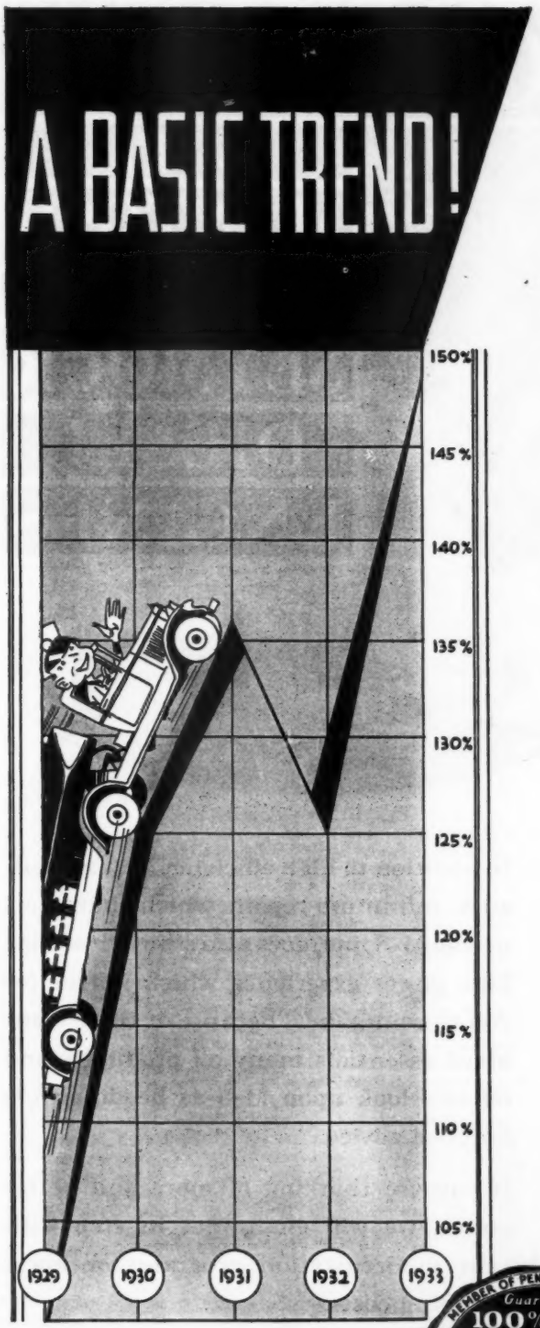
It is preferable to avoid the use of internal bearings for the high-speed hot oil pumps and design the shaft to be rigid when it is supported by two outboard bearings. The internal bearings are a source of trouble, due to abrasive and corrosive action of hot oil at high peripheral speeds of the shaft and high velocities of the liquid passing through small clearances. Shaft sleeves and wearing rings are either stellited or made of 3½ per cent hardened nickel steel.

The stellite will give a much better service when used for wearing rings when pumping corrosive hot oils than the case-hardened steel or nitroloy.

As far as the shaft sleeves are concerned there is no commercial metal on the market that would not get scored in a relatively short time on high pressure hot oil pumps at a temperature over 650° F. The only remedy at the present time is to reduce the pressure, preferably to the suction pressure on both stuffing boxes, cool the hot oil, shaft sleeves and packing in the stuffing box, by direct contact by injection of cold oil into the stuffing box and guard against tightening the packing too much.

MRS. W. L. MACKENZIE DIES

PETROLIA, Ontario, April 2.—Word was received by cable last week of the death in Manchester, England, of Mary Ogilvie, wife of William L. MacKenzie, in her sixty-sixth year. Born in Wyoming, Ontario, she married Mr. MacKenzie, at that time prominent as a driller in partnership with his brother, the late John MacKenzie, in the Oil Well Supply Co. at Petrolia. Mr. MacKenzie moved in 1908 to England, where he organized Oil Well Engineering Co. Mrs. MacKenzie is survived by her husband, three sons, W. L. in Vancouver and Hector and Jack in Borneo, and two daughters.



Is the future of YOUR *motor oil business built on it?*

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This astonishing growth has occurred because modern motors need the inherently superior quality of Pennsylvania oils, and motorists know it. It is a *basic trend*—a solid basis for future profitable business.

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To use the emblem, it must meet the Association's rigid minimum standards for quality.

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There's a big market before you. Take on an emblem Pennsylvania oil *now*. Push it for all you're worth!

PENNSYLVANIA GRADE CRUDE OIL ASSOCIATION
Oil City, Pennsylvania

THE ASSOCIATION EMBLEM
This emblem is an outstanding sales advantage for your oils. Motorists are being told exactly what it means—a 5-point program of consumer protection. Regulations for using the emblem will be sent on request.

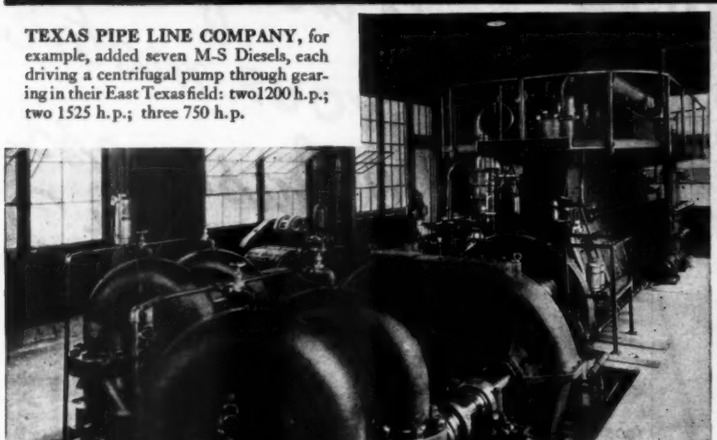
MEMBER OF PENNSYLVANIA GRADE
Guaranteed
100% PURE
PENNSYLVANIA
OIL
CRUDE OIL ASSOCIATION
PERMIT NUMBER.....
Made from
the highest grade crude oil in the world

THE ASSOCIATION ADVERTISING
The Saturday Evening Post and Time are carrying full page advertisements which sell for you, if you sell a Pennsylvania oil under the Association emblem. This is your advertising. Show it to your customers.

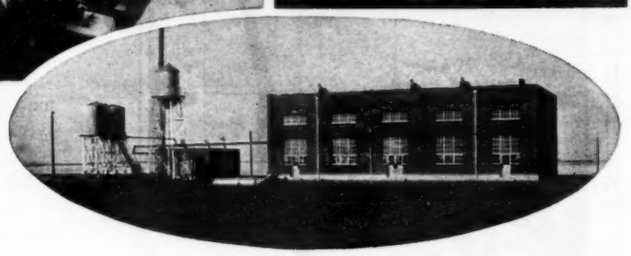
BETTER OILS FROM THE GROUND UP!

PIPE LINES "GO MODERN" WITH McINTOSH AND SEYMOUR DIESEL ENGINES

TEXAS PIPE LINE COMPANY, for example, added seven M-S Diesels, each driving a centrifugal pump through gearing in their East Texas field: two 1200 h.p.; two 1525 h.p.; three 750 h.p.



750 h. p., 6-cylinder M-S Diesel gear-connected to large centrifugal oil pump at the Texas Empire Pipe Line Station.

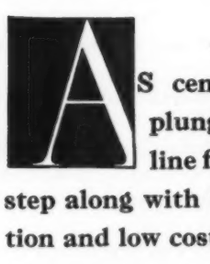


AS centrifugal pumps replace plunger pumps in the pipe line fields, M-S Diesel engines step along with the spirit of modernization and low costs.

More than two hundred M-S Diesel engines in the oil industry, some of which are fifteen years old and still going strong, place us in a position to show you *performance* records that "speak with authority."

In addition to high efficiency, low attendance, minimum repairs which characterize the M-S line, goes also a wealth of Pipe Line power experience which is free for you to command. Because of these combined essentials many oil producers and refiners look upon M-S as headquarters for good advice.

If you are thinking of more and better power, we will gladly get in step with your modernization program for lower pumping costs.



This Catalog-Bulletin brings you the latest developments in standard M-S Diesel engine construction, also a variety of applications.

Ask for Bulletin No. 151

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Fuel and Lubricating Oil Needs of Air Cooled Passenger Car and Commercial Engines

By T. C. DOMAN
Doman-Marks Engine Co.

If the average motorist is asked the question, "do you drive an air or water-cooled car?" invariably the reply is "water cooled, of course." Fundamentally, his answer is incorrect as we all drive air-cooled cars. We may, however, divide our cars into two classes; those cooled directly by air and those cooled indirectly by air through the medium of water.

The fundamental difference in these two types lies in the fact that on the direct air-cooled engine the blast of air from the fan is directed onto the heated parts of the engine, and in the water-cooled type, the cooling water takes heat from the engine and carries it to the radiator where the blast from the fan removes the heat.

The fact that a cooling system is needed is merely an admission of the low efficiency of air internal combustion gasoline engines. It has been established that approximately 35 per cent of the energy of the fuel is taken away in the cooling system, whereas the maximum useful efficiency under the most ideal conditions is approximately 25 per cent. For ordinary driving the efficiency is only about 10 per cent. At this point it might be well to show the most ideal heat balance of our modern gasoline passenger car engines in terms of dollar fuel cost.

Return in useful work	$ .25
Lost through muffler	.37
Lost through cooling system	.35
Unaccounted for	.03
Total	$1.00

The above table shows why the engineer has been working toward higher and higher compression ratios aided by improvement in fuels. In other words, increasing the compression ratio increases the return in useful work and decreases the loss through the cooling system and muffler.

In the last few years here and abroad research work on combustion chambers has resulted in new theories regarding behaviors of gas after it enters the combustion chamber. This work has shown that maximum compression ratio or compression pressure is determined by the temperature of the last charge to burn. With this fundamental combustion chambers have been redesigned with the results that compression pressures of 125 pounds are quite common.

Unfortunately practically all of this research work has been done on water-cooled engines and very little on the direct air-cooled type. However, the same principles can be applied to the air-cooled type and, no doubt, will appear in some radically new air-cooled designs likely to appear in the very near future.

For a given octane rating of a fuel, the water-cooled engine of today can use a higher compression pressure without knocking. This, of course, refers to direct air-cooled engines used for passenger car, stationary or commercial work. Aviation engines, however, are most popular in the air-cooled type and are on a par or perhaps a little bit ahead of the water-cooled aircraft engine as regards maximum permissible compression pressures.

Intake Temperature

It has been found that the air-cooled engine is more sensitive to the temperature of the intake gas than the water-cooled type. This probably is explained by the fact that the mixture after leaving the intake manifold is heated as it comes in contact with the hot ports and cylinder walls. Actual tests show that a decrease in intake mixture temperature of 25° F. has decreased the metal temperatures of the cylinder by 80° F.

TABLE 1—TEMPERATURE OF OILS OF DIFFERENT VISCOSITIES GOING TO THE BEARINGS WHEN ENGINE IS OPERATED OVER A WIDE RANGE OF SPEED AND POWER OUTPUT

R.p.m.	H.p. load	Temp. in °F. of oil gauge to main bearings S.A.E. 30	S.A.E. 40	S.A.E. 50	S.A.E. 60
1,000	4.5	140	150	156	168
1,500	9.5	170	181	186	197
2,000	17.5	201	211	218	228
2,500	30.0	232	244	249	259
3,000	52.0	264	274	280	288

TABLE 2—POWER OUTPUT AND LOSS OF POWER DUE TO USING HIGHER VISCOSITY OILS THAN NECESSARY

R.p.m.	Continuous Brake Horsepower Output S.A.E. 30	S.A.E. 40	S.A.E. 50	S.A.E. 60
1,000	35.0	34.2	33.7	33.2
1,500	53.5	52.7	52.0	51.3
2,000	71.0	70.0	68.9	68.0
2,500	82.5	81.2	80.0	79 2
3,000	87.0	85.5	84.0	82.5
R.p.m.	Friction Horsepower S.A.E. 30	S.A.E. 40	S.A.E. 50	S.A.E. 60
1,000	4.5	5.3	5.8	7.3
1,500	9.5	10.3	11.0	11.7
2,000	16.0	17.0	18.1	19.2
2,500	22.0	22.8	24.3	26.1
3,000	30.0	31.5	33.0	34 5

This is explained by the fact that if a fuel causes detonation, the temperatures increase rapidly. For best results then the mixture temperature must be kept as low as possible, consistent with good carburetion. A great many of our modern engines are using such large "hot spots" on the intake manifolds in order to obtain rapid "warming up" that the engines never do perform as nicely as they might due to the excessive resulting mixture temperatures. The advent of the thermostatic control for intake gas temperature, however, has gone a long way in bringing about proper temperatures.

To return to fuel requirements for air-cooled engines we might summarize by simply stating that any fuel which gives good performance in the water-cooled engine will perform satisfactorily in the air-cooled type. Very often a given fuel is criticized for knocking, poor starting, poor mileage, etc., when the fuel is not at fault in the least. Proper adjustment of the engine usually will eliminate the trouble and the operator then becomes a strong booster for that particular fuel.

Selection of Lubricants

When it comes to the selection of a lubricating oil for an air-cooled engine, invariably the operator tries to buy something "heavy." He believes that his engine operates so hot that an ordinary oil oil of S.A.E. 30 or 40 viscosity would "burn up." Actually the use of a heavier oil results in higher engine temperatures. Extensive tests run of a six-cylinder air-cooled engine showed increasing oil and cylinder temperatures with each increase in viscosity. In other words the engine operated coolest with S.A.E. 30 and hottest with S.A.E. 60. This information is given in Tables 1 and 2.

The fact that oil temperature increases with the viscosity is due to the increase in friction. Consequently since the fuel consumption is not decreased, the brake horsepower of the engine is decreased. To put it another way, the user pays for the use of heavier oil by obtaining less useful power and in increased gasoline consumption for a given car performance.

Use Lighter Oils

In addition to the decrease in performance, tests have shown that the engine requires more maintenance expense if heavier oil is used. Pistons scuff and score more easily. Piston pins start knocking at early mileage. All due to improper lubrication just immediately following starting.

It has been said that more harm is done in one month of winter driving than in 11 months of summer operation. This statement is more or less correct. The average motorist worries too much about his oil being too thin in winter. He should worry about its being too thick. His engine would live through the winter in much better shape if he put a quart of kerosene in his crackcase. Better still, of course, would be the use of a real winter oil.

It is difficult to imagine that S.A.E. 40 oil undiluted at plus 10° F. will support a man weighing 150 pounds. This being the case, how, then, can an oil pump be expected to circulate such a substance? Actual tests on an engine at 0° F. with S.A.E. 40 undiluted oil showed no oil pressure for 14 minutes after the engine was started. However, the same engine when operated at 0° F. with a mixture of six quarts S.A.E. 40 and one quart of kerosene showed instantaneous pressure when started.

Back through the years countless designs of "trick starting devices" have appeared and disappeared. Yet the biggest aid to winter starting and care-free winter operation is an oil of low viscosity. With a heavy oil the starter can barely turn over the engine and then the engine cannot develop enough power to overcome the friction of the oil once it does not start to fire. The use of a proper winter oil not only permits the

(Continued on Page 64)

Allegany Refineries, Inc., Making Wide Variety Products From Local Crude

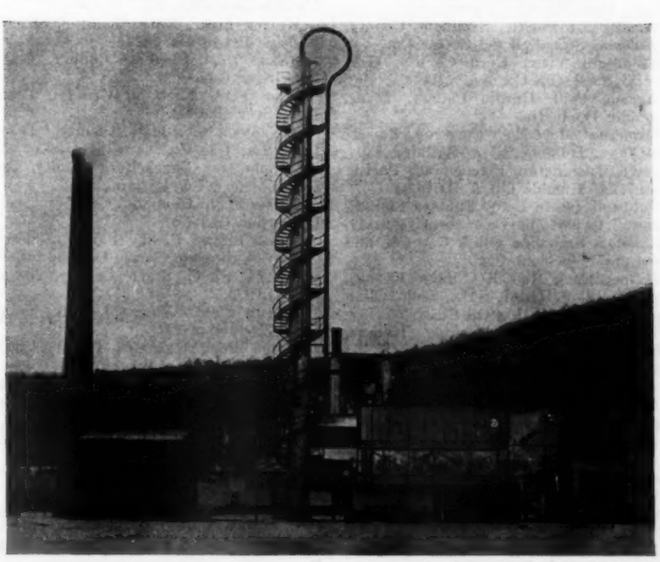
By NEIL S. SULLIVAN
Secretary-Treasurer, Allegany Refiners, Inc.

During the fall of 1932, the oil producers of the Allegany district Penn Grade oil producing area were confronted with the serious problem of safeguarding the future of its oil producing industry upon which the area has depended for its economic existence for over a period of 50 years.

After a rigid period of conservation and proration of two years, the producers of this Allegany area were notified by certain major purchasing companies that upon expiration of the contracts then in effect, that the same would be automatically terminated and that the same companies which had been buying this crude to the amount of approximately 750 bbls. per day would no longer be in a position to furnish a market for this crude. The reason given was that the crude in mention was dark in color and therefore objectionable due to contamination of other crude which must be transported through the gathering system at the same time.

Realizing the seriousness of the situation as it confronted some 700 odd individuals either directly by royalty or working interests as well as those mentioned above together with the welfare of this community, a group of men influential in the oil industry, united their

(Continued on Page 64)



General view of plant of Allegany Refiners, Inc., recently completed refinery at Bolivar, N. Y.

Treating Limestone Formations Consists of More Than Pouring Hydrochloric Acid in the Well

By N. A. BEST
Dowell Incorporated, Tulsa

Industries in entirely different fields have often been benefited by an interchange of ideas and products. This is no reflection on the progressiveness or ability of the one benefited. The advance has been made by an entirely new angle of approach to the problem.

The petroleum industry in the past has contributed many valuable raw materials to the chemical industry. The science of chemistry, in turn, has recently contributed an important process to petroleum production. This is the development of an inhibitor for acids and methods of application, placing the acid treatment of wells on a safe and workable basis.

Sporadic attempts to reduce this very obvious operation upon lime pay to practice covers a considerable span of years. However, only since the perfection of an inhibitor for the acid employed, together with new methods of application, has it attained its present widespread use.

An inhibitor in this case is a substance added to the acid which prevents it attacking the metal parts exposed in the well and surface equipment. This inhibiting action is probably partly catalytic reaction without suffering any appreciable chemical change itself. It does not, in any way, interfere with the use of the acid on calcareous material.

Inhibitor does not protect zinc or lead against the action of acid and when a lead plug has been used in a well, it must be protected while the acid is being used. Likewise, galvanized tubing will no longer be galvanized where it comes in contact with acid for any length of time. It may be well also to point out that some inhibitors have only a temporary inhibiting value so that under certain conditions, their use is more or less unsafe.

The use of poor inhibitors or no inhibitor at all and thoughtless application by untrained and careless help has resulted in needless damage in too many cases. The so-called acidizing of wells has become in these instances mere rule of thumb acid doseing.

While on this phase of the subject, the statement may be made that there is as much potential damage to a well, and even the lease, stored up in 1,000 gallons of muriatic (hydrochloric) acid as there is in a good-sized shot of nitroglycerin if thoughtlessly applied.

Technical Background

The whole proposition looks very simple on the face of it but when gone into thoroughly, presents many points requiring careful study. In our own company, every man, even with a technical background, follows a special course of study with a few weeks apprenticeship before taking charge of a well treatment. Field work should be always checked by laboratory experiment and tests.

What can be called the flow capacity of the formation into the well hole, of course, determines the oil-producing capacity of the well. If the pay is uniform in porosity and free from cracks and fissures, the oil must be forced through the pores to enter the well hole and the producing area, and what might be called the neck of the bottle is the surface area of the pay exposed in the hole.

Providing there is an adequate quantity of oil to draw upon, the problem fundamentally is to increase the permeability of the oil-bearing formation. The method of attack is therefore primarily one of forcing the acid under sufficient pressure into the structure, thereby increasing the permeability if the structure is uniform but if the formation is fissured, increasing the size of the fissures. The presence of fissures is not necessarily a disadvantage as these channels act as a collecting system and greatly increase the total area of the inlet into the well hole.

TABULATIONS SHOWING SETTLED PRODUCTION RATES PER 24 HOURS BEFORE AND AFTER ACID TREATMENTS EMPLOYING LATEST WATER CONTROL METHODS

Pool—	Before Oil (bbls.)	Before Water (bbls.)	After Oil (bbls.)	After Water (bbls.)
Eldorado, Kans.	3	7	60	10
Eldorado, Kans.	30	45	105	108
Potwin, Kans.	8	¾	83	2
Augusta, Kans.	1	1	35	0
Greenwood County, Kansas	1½	3	17	3
Chautauqua County, Kansas	4	2½	35	2½
Seminole, Okla.	15	15	100	15
Seminole, Okla.	50	75	250	100
St. Louis, Okla.	2½	7½	122	10
Oilton, Okla.	77½	388	487	846

Increase of Oil on Silurian Wells	Bbls.
After	487
Before	77½
Oil increase (6⅓ times)	409½

Increase of Water	Bbls.
After	846
Before	388
Water increase (2¼ times)	458

The action of hydrochloric on lime produces water, CO_2 and calcium chloride. If the structure is dolomitic, there will also be magnesium chloride produced in addition to the above. The stronger and more concentrated the acid used, the more heavy and viscous will be those products of the reaction. If there is no appreciable gas or water pressure behind the oil, the problem of cleaning out these products of the reaction becomes serious and requires considerable attention. If the lime contains sand, the condition is further complicated. This problem will be dealt with later in connection with the discussion of water control.

Field Data Necessary

As the point of application of the acid is located at the opposite end of a small steel tube from 1,000 feet to 2 miles long, the first step is to get as accurate knowledge of bottom hole conditions as is possible. This information should include nature and location of casing seat, total depth and diameter of well, whether the casing is cemented or not, accurate location of pays, source of water if any produced, production history of the well and all other information of possibly less importance.

If there is any question concerning the solubility of the pay in acid, a sample should be tested. If not at least 25 per cent soluble, experience indicates that very little gain will result from treatment under ordinary conditions.

It is forunate that a much more accurate log is being kept of wells recently drilled, especially in formations susceptible to acid treatment. It should be unnecessary to call attention to the obvious point of keeping as accurate data on gas and water-bearing formation, no matter how small, as is kept on the oil shows.

The reason is that often precautions can be taken to protect these water-bearing formations from the action of the acid, thus controlling the water increase to a considerable extent. If the gas-oil ratio is not satisfactory, the gas-bearing pay can also be protected and this ratio controlled within desired limits. In our treatments we use special chemical compounds for this purpose. They have proven to be a very material aid in securing desired results.

Good Pipe Essential

The size, weight and condition of casing and tubing is important. In hard, dense formations it is sometimes desirable to build up the casinghead pressure as high as safely possible. In wells with a natural gas pressure which will cause them just barely to flow after acid treatment, we have run the casinghead pressure as high as 1,000 pounds during treatment. It is possible to treat wells of any pressure with equipment designed for such service. The only disadvantage of such equipment is that high volume handling ability must be sacrificed to high pressure as the power available on a portable outfit is limited. In such hard formations, it is difficult to get the desired results if the casing is in poor condition.

Acid will dissolve rust, even if inhibited, and if the steel is rusted through in spots, there will be holes in those places after the acid treatment. Rusty threads are also destroyed by the acid, causing leaky joints.

Introducing Acid Into Well

There are two principal methods now being used in introducing the acid into the formation. The easiest and simplest way is to merely siphon the charge down the casing, following it up with oil to form a hydrostatic pressure to force it into the formation. In very porous formations this can be done with little danger, but it has the following disadvantages. Part of the acid will trickle down the face of the hole and be partly neutralized on the surface of any lime above the point where the treatment should be concentrated. In all but the most porous formations, there is a liability that the fluid column of acid will stand to some height in the hole even reaching up into the casing. In such a case, should the casing seat be of lime, there is some danger of damage with consequent bad results. The only way to guard against this bad feature is to measure the rate at which the oil sinks into the hole, using a Halliburton float and line for

Petroleum Administrator Has Approved Plans for New Pool Development

WASHINGTON, D. C., April 2.—Administrator Ickes has approved the development plans for the following pools, submitted by the respective companies:

Kettleman Hills, Middle Dome, Calif. San Miguelite, California, submitted by Continental Oil Co.

Ellinwood Pool, Barton County, Kansas, Stanolind Oil & Gas Co.

Richardson Field, Stafford County, Kansas, Stanolind Oil & Gas Co.

Caillou Island, Terrebonne Parish, Louisiana, Texas Co.

Hillbig Pool, Bastrop County, Texas, Humble Oil & Refining Co.

Premier Field, Kern County, California, Ohio Oil Co.

Sasakwa townsite, Seminole County, Oklahoma, Stanolind Oil & Gas Co.

Mountain View, Kern County, California, Shell Oil Co. and others.

Arriola Pool, Hardin County, Texas, Republic Production Co.

Cameron Meadows, Cameron Parish, Louisiana, Humble Oil & Refining Co.

Lake Washington, Placuemines Parish, Louisiana, Humble Oil & Refining Co.

Caldwell (state line), Sumner County, Kansas, Gypsy Oil Co.; Grant County, Oklahoma, Stanolind Oil & Gas Co., and Amerada Petroleum Corp.

Dillner Pool, Russell County, Kansas, Empire Oil & Refining Co., and Indian Territory Illuminating Oil Co.

Elrod Pool, Cowley County, Kansas, Empire Oil & Refining Co.

Hadley Pool, Ellis County, Kansas, Deep Rock Oil Corp.

Latta Pool, Sumner County, Kansas, Champlin Refining Co.

Luhman Pool, Rooks County, Kansas, Vickers Petroleum Co., and A. H. Krueger.

Ochs Pool, Russell County, Kansas, Empire Oil & Refining Co., and Sinclair Prairie Oil Co.

Piggott Pool, Osage County, Oklahoma, Empire Oil & Refining Co.

White Castle Dome, Iberville Parish, Louisiana, Shell Petroleum Corp.

Louise area, Wharton County, Texas, Pure Oil Co.

Gueydan Pool, Vermilion Parish, Louisiana, Pure Oil Co.

Long Lake Field, Anderson, Leon and Freestone Counties, Texas, Tide Water Oil Co.

Lucien Field, Noble County, Oklahoma, Shell, Sinclair, and others.

Closson Pool, Lea County, New Mexico, Empire Oil & Refining Co.

Fitts (John) Pool, Pontotoc County, Oklahoma, E. H. Moore and others.

Johnson area, Ellis County, Kansas, Phillips Petroleum Co.

Shutts area, Ellis County, Kansas, Phillips Petroleum Co.

Weigel area, Ellis County, Kansas, Phillips Petroleum Co.

Brooks Pool, Stephens County, Texas, Lone Star Gas Co.

Dyer Pool, Eastland County, Texas, Lone Star Gas Co.

Fee Pool, Eastland County, Texas, Lone Star Gas Co.

Flippin area, Shackelford County, Texas, Humble Oil & Refining Co.

Grove Pool, Eastland County, Texas, Lone Star Gas Co.

Gato Ridge Field, Santa Barbara County, California, Texas Co. and others.

Guerra Field, Starr County, Texas, Sun Oil Co.

Keeran Field, Victoria County, Texas, Gulf Production Co.

Kuske Pool, Sedgwick County, Kansas, Producers & Refiners Corp.

Stickel Pool, Rice County, Kansas, Gypsy Oil Co. and others; Carbon County, Montana, Ohio Oil Co.

Embar-Tensleep, Big Horn County, Wyoming, Ohio Oil Co.

Frannie, Park County, Wyoming, Continental Oil Co.

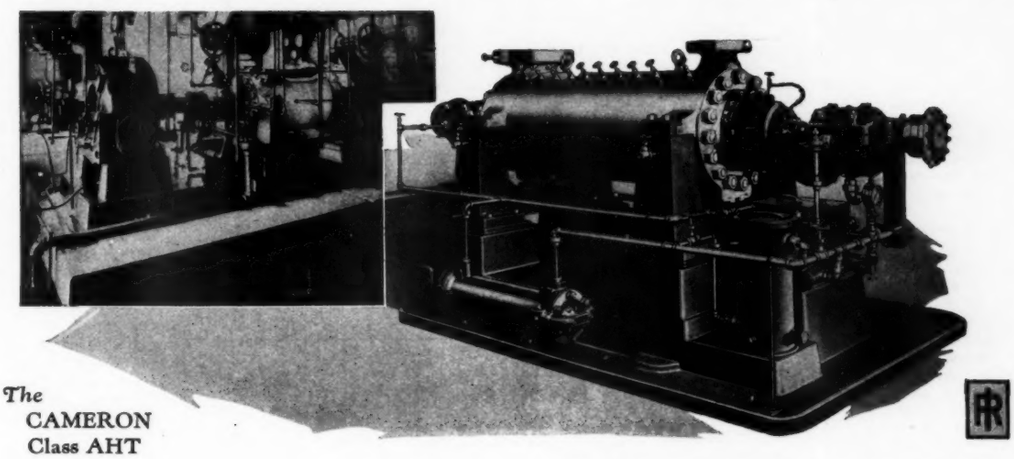
Garland, Big Horn County, Wyoming, Ohio Oil Co. and Utah Southern Oil Co.

Hansard, Clay County, Texas, Texas Co.

Rex Lake, Albany County, Wyoming, Ohio Oil Co.

550 g.p.m. non-pulsating flow
1250 pounds pressure
10,000 hours of uninterrupted service

A Typical Service Record of the *Cameron* Hot-Oil Charging Pump



The CAMERON Class AHT

Withstands high pressures, high temperatures, and corrosive action of oils.

Has water-cooled stuffing boxes under suction pressure.

Is safety-sealed against hot-oil leakage and escape of fumes.

Has provision for expansion caused by high oil-temperatures.

Permits easy inspection and renewal of wearing parts.

Can be dual-driven to eliminate standby unit.

Will handle new operating conditions efficiently by a change of impellers and diffusors.

Can operate close to maximum coil pressure because of its smooth, nonpulsating action.

Is ideal for bringing coil up to temperature when starting or taking coil off stream.

10,000 hours without dismantling or expense for repairs. 100% availability.

Performances like this have *sold* refinery officials on the Cameron centrifugal Hot-Oil Charging Pump. It is a pump that can be depended upon for continuous service. It has a high efficiency and maintains it.

Cameron Charging Pumps are available in ratings to meet the requirements of modern refineries.

They reduce installation costs.

They reduce maintenance charges.

Our engineers are experienced in refinery operations and will be glad to work with yours in selecting the pumps best suited to your requirements. Inquire of our nearest office.

Birmingham	Chicago	Detroit	Los Angeles	Philadelphia	Scranton
Boston	Cleveland	Duluth	Newark	Pittsburgh	Seattle
Buffalo	Dallas	El Paso	New Orleans	Salt Lake City	St. Louis
Butte	Denver	Knoxville	New York	San Francisco	Washington

14-10

Ingersoll-Rand

Cameron Pump Division
11 BROADWAY, NEW YORK CITY

measuring. Even then, the rate of oil production would not be a safe gauge to judge the rate at which the formation would take acid.

It has been reported that many casing seats have been damaged, making it practically impossible to re-treat the well at some future date. In certain formations it has been proven that re-treatments at stated intervals will prove as profitable to the well owner as the first treatment. The production decline curve after re-treatments would have been no more abrupt than after the first treatments—often much less so.

Carr Method

Although it runs into a greater first cost, our organization prefers the so-called Carr method of applying the acid. This is fully described in a patent issued to Richard R. Carr and assigned to the Pure Oil Co.

This method involves the removal of rods, traveling valve and standing valve. A length of perforated pipe should be on the bottom, closed at the lower end with a bull plug to break the force of the falling acid. The top of the perforations should be about even with the highest formation to be treated. A gas-tight casinghead or bradenhead should be installed at the top, having ample strength to withstand the pressures likely to be encountered during treatment.

The casinghead should be fitted with at least a 2-inch connection and high pressure valve for bleeding off oil. It should also have a connection for a pressure and vacuum gauge. The tubing should be fitted with a high pressure valve at the top and then a union so that after the treatment is completed, the treating outfit can be detached without releasing the pressure on the well.

This should be also fitted with a connection for a vacuum and pressure gauge, preferably above the shutoff valve. The well is first filled with oil through the tubing until it runs out the bleeding off connection at the top of the casinghead. The acid is then introduced either by pump or siphoning, together with auxiliary chemicals for the purpose of water control. A quantity of oil is bled off at the casinghead after some little pressure has been built up corresponding to the volume of oil contained in the tubing and the portion of the bottom hole that it is required to treat. If the casing seat is quite close to the treating zone in the bottom hole, these volumes are always calculated with considerable care so not to allow the acid to rise up to the casing seat.

In cases where the inner string of casing is not cemented at the bottom or is known to be defective, a hook wall packer should be set against the formation above the treating zone and should be further fortified by being loaded with oil above it. After the acid is all introduced, it should be followed up with sufficient oil to insure all the acid being displaced from the tubing and well hole into the formation.

Water Control

Is water control possible? Our experience indicates that it is to some considerable extent. What uncertainty there is arises from lack of knowledge of exact bottom hole conditions. Laboratory experiments on blocks of limestone with introduction of acid under pressure indicates that often the acid creates small irregular passages through the material not unlike worm holes.

Mud and clay are often used in an attempt to protect the bottom of the bore and prevent the acid from making channels into a lower water-bearing strata. It has been found, however, that a chemically inert liquid, heavier in specific gravity than the acid and of low viscosity, gives superior results. This liquid will tend to move out with the acid and restrict its downward course. Being liquid, it can be readily removed from the well after treatment along with the other products of the reaction.

Under the most favorable conditions, with an adequate supply of this blanket in the hole, the action of the acid will still be more or less downward unless it encounters crevices or fissures or extremely porous streaks leading in an upward direction. Assuming the acid cuts channels in a more or less downward direction, it can be understood how the products of the chemical reaction, if there is not a very high bottom hole pressure, can effectively block off all production of the well after the acid treatment. This effect is more pronounced as stronger acid is used. Also, if, as mentioned before, the lime contains some considerable proportion of sand or other unsoluble material which might settle in these channels and effectively cement them off against the oil finding its way again into the well, there will be no difficulty bringing in the oil.

In cases where a well has been treated several months previous and the production has again fallen below a paying production, this blanketing material may be used in sufficient quantity to block off all the channels formed by the previous treatment and new oil has often been brought in on subsequent retreatments. A series of retreatments always requires a greater amount of this blanketing material on each occasion.

Tabulated Results

Appended tabulation is more for the purpose of showing what can be done in the way of water control than to show startling results in oil production, which can be taken for granted. In figuring increases both in oil and water, the increase should be taken at least 30 days after the acid treatment in order to get a true measure of results obtained.

When increased results are accentuated during the flush production of the well after treatment, there is bound to be some disappointment experienced when the production curve has flattened out to a more or less steady quantity. Percentages of increase running into several thousand per cent during the flush period may be only several hunder percent when measured after this first flush of production, except in new fields where most of the wells are extremely small until they are treated.

The element of safety from a personal standpoint should not be lost sight of. A small quantity of muriatic acid in the eyes will result in loss of sight unless instantly washed with a neutralizing solution. A quantity of soda solution is always kept at hand for emergency use during a well treatment. Everyone on the derrick floor and about the pumping apparatus during the treatment is required to wear splash proof safety goggles. Special workmen's compensation and liability insurance should never be omitted. Like hazards in all branches of industry, the small extra expense of safety is amply justified.

The employment of acid treating in view of the present overproduction of oil would seem to be contrary to the spirit and purposes of conservation until thoroughly considered from all angles. There are numerous small stripper lime wells which had approached their low limit of economic production which, due to acid treatment, are now producing on a profitable basis. If it were not for application of acid in these cases much of this oil now being produced would probably never be recovered. The ultimate economic recovery therefore of most fields, if not the total ultimate recovery, is thereby considerably increased. Due to the slump in consumption of petroleum products, caused by the depression, with consequent let up in exploration and drilling, it is estimated that the industry is at least two years behind in its drilling program. It can therefore be seen what a valuable adjunct the acid treatment of wells will prove to be to the industry as time passes and present flush fields are depleted.

The Oil Man's Calendar

April

5-6—Excelsior Springs, Mo., Western Petroleum Refiners Association, Elms Hotel.

6-7—American Petroleum Institute, Eastern district meeting, Division of Production, State College, Pa.

10—Michigan Independent Distributors Association, place to be named later.

12-14—Dallas, Texas, Petroleum Industry Electrical Ass'n., Baker Hotel.

16-21 — Houston, Tex., Oil Equipment and Engineering Exposition.

19-20—National Petroleum Association, Cleveland, Ohio.

20-21—Fort Worth, Tex., American Petroleum Institute, southwestern district meeting, division of production.

May

1-4 — Washington, D. C., U. S. Chamber of Commerce.

3-4-5 — Kansas City, Mo., twelfth Midwest regional meeting of American Chemical Society.

9-10-11 — Tulsa, Natural Gasoline Association of America, New Hotel Tulsa.

12-19—Tulsa, International Petroleum Exposition.

14-21—American Institute of Chemical Engineers (tentative), Waldorf-Astoria, New York.

16—Tulsa, Mid-Continent Oil and Gas Association, annual meeting.

17—Tulsa, Independent Petroleum Ass'n. of America, Mayo Hotel.

17-18—Roanoke, Va., Virginia Oil Jobbers Association, and Virginia Oil Men's Association.

21-22—Lake Charles, La., National Oil Scouts Association of America, annual convention.

22-24 — Pittsburgh, Pa., midyear meeting, A. P. I. divisions, William Penn Hotel.

June

14-15—State College, Pa., Pennsylvania Grade Crude Oil Association.

14-15—Northwest Petroleum Association, North Dakota division, place to be decided later.

25-29—A.S.T.M. annual meeting, Chalfonte-Haddon Hall Hotel, Atlantic City, N. J.

25-29—American Society of Mechanical Engineers, Denver, Colo.

28-29—State College, Pa., Pennsylvania Grade Crude Oil Association.

28-29 — Charleston, W. Va., West Virginia Oil Marketers Association.

September

9 — Wernersville, Pa., American Trade Association executives.

10-14 — Cleveland, Ohio, American Chemical Society.

19-21 — Atlantic City, N. J., National Petroleum Association.

October

9—Michigan Independent Petroleum Distributors Association, place to be named later.

16-18—Big Four State Jobbers Association Convention, Kansas City, Mo.

29—American Gas Association Convention and Exhibition, Atlantic City, N. J.

November

5-9—Cleveland, Ohio, Automotive Service Industries Show, Cleveland Public Auditorium.

Los Angeles, Calif., American Association of Petroleum Geologists, Pacific section.

12-15—Dallas, Tex., annual meeting, A.P.I.

Changes in Committees on Drilling Practices

WASHINGTON, D. C., April 2.—The Planning and Co-ordination Committee has announced the following changes in the personnel of the regional, state and district committees:

Regional Production Committee, Region No. 5: A. J. Hazlett, of the Inland Oil Index, Casper, Wyo.

Subcommittee on drilling practices of New Mexico State Production Committee, to represent the drilling branch: G. C. Conrad, Oil Well Drilling Co., Hobbs, N. Mex.; George McQueen, McQueen & Clevenger, Fort Worth, Tex.; and J. W. Berry, Artesia, N. Mex.; to represent the producing branch: Van Welch, Artesia, N. Mex.; James Creedon, Skelly Oil Co.; and E. A. Landreth, Fort Worth, Tex.

Subcommittee on drilling practices of the Kansas State Production Committee, to represent the drilling branch: R. C. Patton, Patton Drilling Co., Eureka, Kans.; R. A. Streeter, Stearns-Streeter Drilling Co., Wichita; A. O. Olson, Olson Drilling Co., Tulsa; and A. E. Lloyd, Frost Drilling Co., Wichita; to represent the producing branch: M. R. Shaffer, Empire Oil & Refining Co., Bartlesville, Okla.; Ben Horton, Sinclair Prairie Oil & Gas Co., Wichita; Frank Oliver, Gypsy Oil Co., Wichita; and Lee Scott, Vickers Petroleum Co., Wichita.

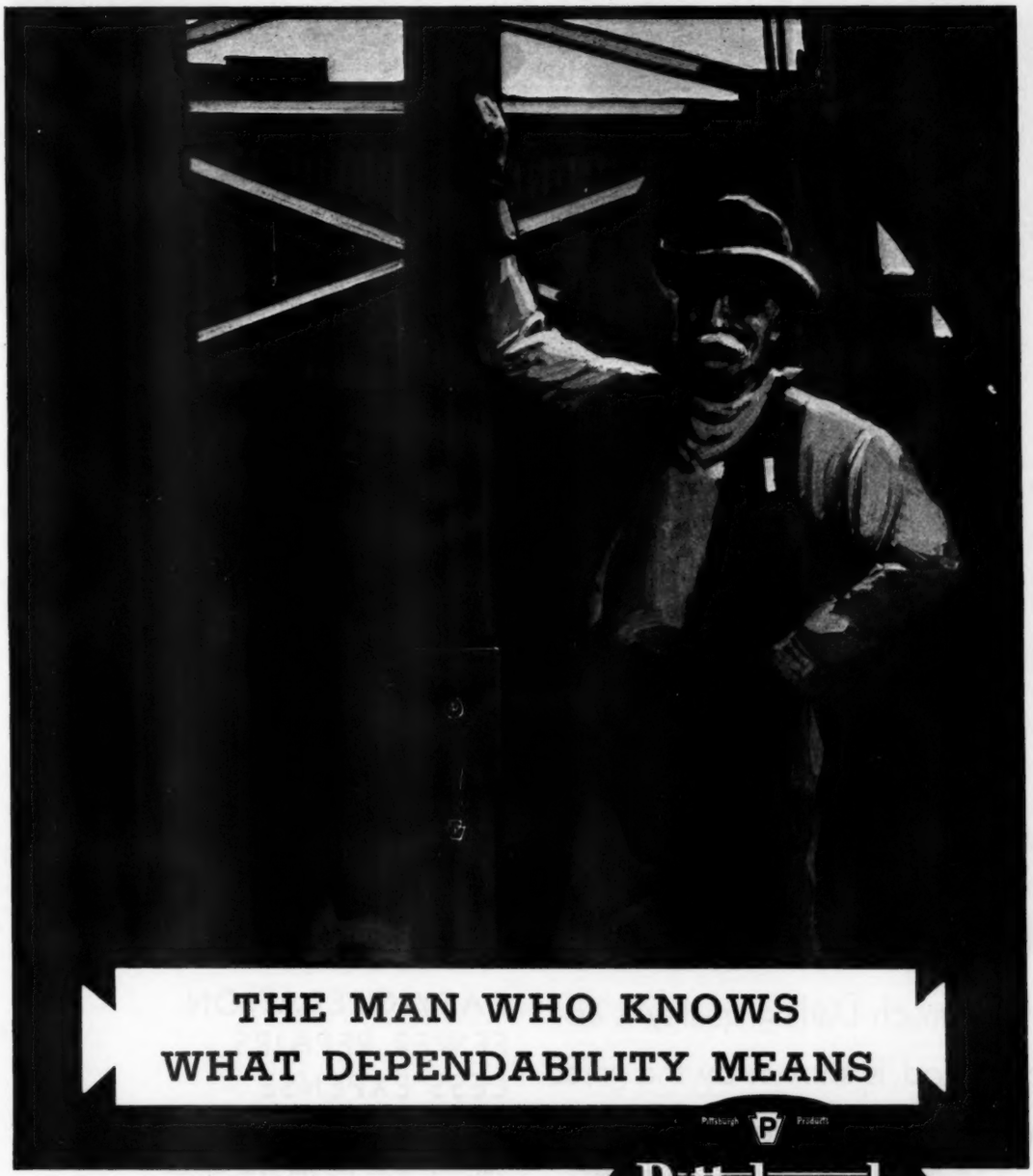
Subcommittee on drilling practices of the Oklahoma State Production Committee, to represent the drilling branch: G. A. Manahan, Manahan Drilling Co., Tulsa; Thomas D. Phillips, National Drilling Association, and Mead & Phillips Drilling Co., Tulsa; H. L. Sullivan, Loffland Brothers, Tulsa; Dell Schoenfeld, Schoenfeld & Hunter Drilling Co., Oklahoma City; and E. D. Shell, Ardmore; to represent the production branch: E. J. Nicklos, Continental Oil Co., Ponca City; A. W. Ambrose, Empire Oil & Refining Co., Bartlesville; W. K. Whiteford, Barnsdall Oil Co., Tulsa; Louis Campbell, Magnolia Petroleum Co., Oklahoma City; and C. L. McMahon, independent operator, Tulsa.

Subcommittee on drilling practices of the Texas State Production Committee, to represent the drilling branch: George Cree, Cree & Hoover, Amarillo; John R. Black, Dallas; A. F. McDonald, Smith & McDonald, Houston; M. J. Delaney, M. J. Delaney, Inc., Dallas; A. A. Buchanan, San Antonio; A. H. Rowan, Rowan Drilling Co., Fort Worth; H. H. Bass, H. W. Bass Drilling Co., Dallas; and E. A. Showers, Showers & Moncrief, Houston; to represent the producing branch: A. M. McCorkle, Stanolind Oil & Gas Co., Fort Worth; C. B. Williams, Texas Co., Fort Worth; Marshall R. Young, Roeser & Pendleton, Inc., Breckenridge; Don Logan, Tide Water Oil Co., Houston; David Frame, Humble Oil & Refining Co., Houston; Joe S. Russell, Gulf Production Co., Houston; E. L. Smith, E. L. Smith, Inc., Mexia; and George D. Morgan, Cardinal Oil Co., San Angelo.

MAGNOLIA ELECTS OFFICERS

DALLAS, Tex., April 2.—D. A. Little was re-elected president of the Magnolia Petroleum Co. at its annual meeting and E. R. Brown was re-elected chairman of the board. Other officers were renamed: Ralph H. Kinsloe, vice president and general manager; W. H. Francis, vice president and general counsel; E. E. Plumly, vice president and manager of refineries; M. J. McLaughlin, vice president and manager of production; J. C. Stephens, vice president in charge of transportation sales; E. P. Angus, vice president and manager sales; C. L. Gladden, vice president; Clyde M. Bennett, vice president; F. M. Lege, Jr., vice president; T. J. Fitch, vice president.

Directors renamed were: E. P. Angus, T. J. Fitch, C. L. Gladden, Ralph H. Kinsloe, D. A. Little, E. E. Plumly, W. A. Sniffen, E. R. Brown, W. H. Francis, W. L. Holmes, F. M. Lege, Jr., M. J. McLaughlin, and L. S. Sinclair.



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How much Darling quality is appreciated is shown by the great number of prominent users who specify only Darling year after year. Their reasons for sticking to this one make of valve are

EASY OPERATION
FEWER REPAIRS
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You can say the same when equipped throughout with these famous gate valves.

DARLING VALVE & MFG. CO.
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Mid-Continent Distributors: International Supply Co., Moorlane Company
California Distributors: Hickey Pipe & Supply Company, 3375 East Slauson Ave., Los Angeles, Calif.

DARLING
GATE VALVES

Summary of Operations in All Fields for February, 1934

Wells Completed in February

	Comp.	Prod.	Dry	Gas
Eastern	162	699	13	23
Central Ohio	35	379	9	15
Lima	12	125	6	2
Indiana	20	114	10	4
Michigan	28	9,595	8	3
Kentucky	12	93	5	0
Illinois	0	0	0	0
Kansas	50	22,299	11	2
Oklahoma	115	19,725	27	8
North Central Texas	149	10,553	66	6
E. Cen. and E. Texas	251	15,387	11	1
West Texas	84	77,971	7	0
Texas Panhandle	43	10,607	1	8
Southwest Texas	89	11,111	39	8
East Texas gas area	1	0	1	0
Gulf Coast—Texas	87	34,744	34	6
Gulf Coast—Louisiana	18	4,228	12	0
North Louisiana	34	1,531	13	4
Arkansas	6	785	2	0
Mississippi	3	0	3	0
Montana	5	521	0	0
Wyoming	0	0	0	0
Colorado	3	4,660	0	1
New Mexico	5	10	1	3
Utah	0	0	0	0
Total February	1,162	225,137	279	94
Total January	1,299	351,886	270	81
Difference	137	126,749	9	13

Rigs and Wells Drilling

	Rigs	Drlg.	Ttl.
Eastern	65	182	247
Central Ohio	18	102	120
Lima	4	25	29
Indiana	1	31	32
Michigan	90	124	214
Kentucky	2	53	55
Illinois	1	11	12
Kansas	39	125	164
Oklahoma	117	371	488
North Central Texas	44	210	254
S. Cen. and E. Texas	77	304	381
West Texas	43	120	163
Texas Panhandle	19	80	99
Southwest Texas	29	107	136
East Texas gas area	2	9	11
Gulf Coast—Texas	38	179	217
Gulf Coast—Louisiana	18	81	99
North Louisiana	58	101	159
Arkansas	9	34	43
Alabama	0	2	2
Mississippi	5	14	19
Montana	7	48	55
Wyoming	13	61	74
Colorado	3	47	50
New Mexico	3	62	65
Utah	1	14	15
Total February	706	2,497	3,203
Total January	641	2,428	3,069
Difference	65	69	134

Note—In the following report the Section, Township and Range are given first; then the farm, the owner, the serial number of the well and the initial production of the well. In lines where the Section, Township and Range are missing the wells are located in the Sections, Townships and Ranges which appear next above in the report.

West Texas Fields

Summary of Wells Completed

County—	Comp.	Prod.	Abd.	Gas
Crane	1	371	0	0
Ector	2	52	1	0
Fisher	1	0	1	0
Glasscock	3	840	1	0
Howard	3	295	0	0
Irion	1	0	1	0
Jones	2	115	0	0
Loving	2	110	0	0
Pecos	7	72,132	1	0
Reagan	1	624	0	0
Tom Green	2	0	2	0
Ward	8	3,367	0	0
Winkler	1	65	0	0
Total February	34	77,971	7	0
Total January	41	129,485	8	1
Difference	7	51,514	1	1

Summary of Rigs and Wells Drilling

County—	Rigs	S.D.	Drlg.	Ttl.
Andrews	4	0	0	4
Brewster	0	0	1	1
Coke	0	0	1	1
Crane	0	1	2	3
Crockett	0	1	1	2
Culberson	0	1	0	1
Dawson	0	1	0	1
Ector	6	3	10	19
Fisher	3	2	9	14
Glasscock	3	2	4	9
Howard	4	3	5	12
Irion	0	1	1	2
Jones	3	2	4	9
Loving	1	2	5	8
Pecos	5	8	5	18
Reagan	2	0	1	3
Runnels	2	4	2	8
Scurry	0	4	0	4
Terrell	0	1	0	1
Upton	2	1	4	7
Val Verde	1	0	0	1
Ward	4	4	13	21
Winkler	3	2	9	14
Total February	43	43	77	163
Total January	40	39	75	154
Difference	3	4	2	9

WELLS COMPLETED

ECTOR COUNTY

Atlantic Oil Prod. Co.'s No. 2 H. M. Jones 52

Broderick and Calvert's No. 1-K E. F. Cowden ..... abd

Completions 2
Initial production 52
Abandoned 1

CRANE COUNTY

Continental Oil Co.'s No. 2-C Cowden .. 371

Completions 1
Initial production 371

FISHER COUNTY

Southern Oil Corp.'s No. 1-A Pardue .. abd

Completions 1
Abandoned 1

GLASSCOCK COUNTY

Humble O. & R. Co.'s No. 2 Nat Washer 528
Schermerhorn Oil Co.'s No. 2 Kloh ..... abd
Simms Oil Co.'s No. 4-A Coffee 312

Completions 3
Initial production 840
Abandoned 1

HOWARD COUNTY

A. J. Frazier et al's No. 1 J. P. Davis.. 67
Pure Oil Co.'s No. 14 Chalk 48
Donelly and Norman's No. 1 Bell 180

Completions 3
Initial production 295

IRION COUNTY

S. C. Colgin et al's No. 1 Tankersley .. abd

Completions 1
Abandoned 1

JONES COUNTY

Roberts Oil Corp.'s No. 2 Swann 40
C. W. Guthrie's No. 1 Campbell 75

Completions 2
Initial production 115

LOVING COUNTY

Sinclair Prairie Oil Co.'s No. 1 J. G. Allen 65
Eppenauer Drlg. Co.'s No. 1-C Allen .. 45

Completions 2
Initial production 110

PECOS COUNTY

Mid-Kansas O. & G. Co.'s No. 5 Fred Turner 18,800
Mid-Kansas O. & G. Co.'s No. 6 Fred Turner 9,984
Mid-Kansas O. & G. Co.'s No. 1 Fred Turner 15,480
Mid-Kansas O. & G. Co.'s No. 37-A Yates 816
California Oil Co.'s No. 1 Bob Reid .. 13,296
Mid-Kansas O. & G. Co.'s No. 41-A I. G. Yates 13,756
M. H. Black et al's No. 1 E. C. Powell abd

Completions 7
Initial production 72,132
Abandoned 1

REAGAN COUNTY

Big Lake Oil Co.'s No. 14-C University 624

Completions 1
Initial production 624

TOM GREEN COUNTY

Hancock et al's No. 1 Reed ..... abd
J. R. Midlock's No. 1 F. Garlitz .... abd

Completions 2
Abandoned 2

WARD COUNTY

Atlantic Oil Prod. Co.'s No. 2 Jim Clamp and W. D. Black ..... abd
Eastland Oil Co.'s No. 2 W. D. Johnson 57
S. A. Thompson et al's No. 5 W. D. Johnson 369
Eppenauer Drlg. Co.'s No. 1 J. W. Hollingsworth 241
Humble O. & R. Co.'s No. 1-F University 72
California Oil Co.'s No. 3 York 423
California Oil Co.'s No. 4 York 385
Gulf Prod. Co.'s No. 40 O'Brien 1650
Sturm and Simms Oil Co.'s No. 1 Jones 170

Completions 8
Initial production 3367

WINKLER COUNTY

Sinclair Prairie Oil Co.'s No. 1-B Scarborough 65

Completions 1
Initial production 65

East Central Texas Fields

Summary of Wells Completed

County—	Comp.	Prod.	Abd.	Gas
Anderson	2	0	2	0
Angelina	1	0	1	0
Henderson	1	0	1	0
Gregg	117	6,903	0	0
Leon	1	0	1	0
Navarro	1	0	1	0
Rusk	92	6,069	1	1
Smith	14	795	0	0
Upshur	19	1,620	1	0
Van Zandt	3	0	3	0
Total February	251	15,387	11	1
Total January	249	15,517	10	0
Difference	2	130	1	1

Summary of Rigs and Wells Drilling

County—	Rigs	S.D.	Drlg.	Ttl.
Anderson	2	0	2	4
Angelina	0	1	0	1
Bowie	1	0	0	1
Cherokee	2	0	1	3
Ellis	0	1	0	1
Fannin	0	1	0	1
Franklin	0	1	0	1
Freestone	0	1	0	1
Gregg	27	9	110	146
Henderson	3	0	0	3
Hunt	1	1	0	2
Kaufman	1	1	0	2
Lamar	0	0	1	1
Leon	4	0	2	6
Limestone	2	1	1	4
Morris	1	2	0	3
Nacogdoches	0	1	0	1
Navarro	1	0	0	1
Rains	1	0	0	1
Red River	0	2	0	2
Rusk	20	8	127	155
Smith	2	3	4	9
Titus	0	1	0	1
Upshur	5	4	9	18
Van Zandt	4	5	3	12
Wood	0	1	0	1
Total February	77	44	260	381
Total January	63	47	246	356
Difference	14	3	14	25

WELLS COMPLETED

ANDERSON COUNTY

Tide Water Oil Co. and Texas Seaboard Oil Co.'s No. 2 Monnig ..... gas
Tide Water Oil Co. and Texas Seaboard Oil Co.'s No. 3 Monnig ..... gas

Completions 2
Gas wells 2

ANGELINA COUNTY

H. C. Jennings et al's No. 1 S. E. Davidson ..... abd

Abandoned 1

HENDERSON COUNTY

H. A. Baker et al's No. 1 J. J. Dupruis. abd

Abandoned 1

LEON COUNTY

E. L. Smith et al's No. 1 W. P. Simpson ..... abd

Abandoned 1

NAVARRO COUNTY

Siam Oil Co.'s No. 1 R. H. Mays ..... abd

Abandoned 1

GREGG COUNTY

Abernathy & Kirkpatrick's No. 8 R. M. Wood, open tubing 150
Atlantic Oil Producing Co.'s No. 12 Joe Bandey, open tubing 150
Atlantic and Sun Oil Co.'s No. 48 M. Hayes, open tubing 120
Atlantic and Sun Oil Co.'s No. 50 M. Hayes, open tubing 120
Atlantic and Sun Oil Co.'s No. 51 M. Hayes, open tubing 120
Atlantic and Sun Oil Co.'s No. 53 Hayes, open tubing 115
Atlantic and Sun Oil Co.'s No. 54 Hayes, open tubing 180
Bond & Dillard's No. 4 J. C. Barrett, open tubing 60
Dearing & McBride's No. 5 Elvera Chapel, open tubing, ½ hr. 35
Iowa-Payne Oil Co.'s No. 3 W. H. York, open tubing, ½ hr. 50
Island Oil Co.'s No. 4 J. W. Akin, open tubing, ½ hr. 59
Magnolia Pet. Co.'s No. 5 Goolsby, open tubing 169
Selby Oil & Gas Co.'s No. 8-C Snavely Heirs, open tubing, ½ hr. 32
Shell Pet. Corp.'s No. 16 W. T. Burnside, open tubing, ½ hr. 40
Shell Pet. Corp.'s No. 10 T. B. Stinchcomb, open tubing, ½ hr. 30
H. R. Smith's No. 6 Bauknight, open tubing 120
A. W. Tarrant's No. 1 Sabine River, open tubing 65
Virginia Oil Co.'s No. 3 T. B. Harris, open tubing, ½ hr. 35
Woodley-Atlantic and Sun Oil Co.'s No. 8 M. Hayes, open tubing, ½ hr. 35
Yount Lee Oil Co.'s No. 6 Annie Lee, 11/16-in. tubing choke 61
Olga Herrman's No. 1-A Wm. Robertson, open tubing, by heads 20
American Liberty Oil Co.'s No. 10 L. P. Griffin, open tubing 130
Delta Drilling Co.'s No. 1 C. L. Still, open tubing, 24 hrs. 22
Elliott et al's No. 2 McNeely, open tubing 125
General Crude Oil Co.'s No. 8 S. Scott, open tubing, ½ hr. 35
Gulf Prod. Co.'s No. 2 M. T. Cole, open tubing 73
Humble Oil & Ref. Co.'s No. 39-B S. S. Laird, open tubing 74
Humble Oil & Ref. Co.'s No. 43 S. S. Laird, open tubing 80
Hunter & Rowe's No. 1 C. L. Still, open tubing 50
Johnson & Owens' No. 8-B M. T. Cole, open tubing 85
Magnolia Pet. Co.'s No. 9 M. B. Hughey, open tubing 104
Reserve Pet. Co.'s No. 2 J. M. Blackman, open tubing, ½ hr. 50
Shell Pet. Corp.'s No. 17-A B. F. Laird, open tubing, ¼ hr. 30
Sinclair Prairie Oil Co.'s No. 13 J. E. Lawther, open tubing 25
Southport Pet. Co.'s No. 1 L&G.N.R.R., open tubing 100
Texas Co.'s No. 7 W. Baxter, open tubing 85
Texas Co.'s No. 5 Lizzie Radford, ½-in. tubing choke 20
Vireca Oil Corp.'s No. 2 M. T. Cole, 2½-in. tubing choke 90
Abernathy & Kirkpatrick's No. 7 R. M. Wood, open tubing 100
Atlantic and Sun Oil Co.'s No. 47 Hayes, open tubing 115
Atlantic and Sun Oil Co.'s No. 52 Hayes, open tubing 115
Barnsdall and Houston Oil Co.'s No. 13 J. G. McGrede, open tubing 105
Bishop Oil Co.'s No. 3 B. C. Todd, open tubing, ½ hr. 50
Bond & Dillard's No. 12 J. C. Barrett, open tubing 45
Day & Hancock's No. 2 L. E. Jeter, open tubing, ½ hr. 30
F. H. E. Oil Co.'s No. 7 Christian, open tubing 80
Heyser & Heard's No. 10 Guy Hindman, open tubing 75
Magnolia Pet. Co.'s No. 11 Ziegler, open tubing 145
Selby Oil & Gas Co.'s No. 6 Annie Miller, open tubing, ½ hr. 38
Shasta Oil Co.'s No. 2 E. G. Richey, open tubing 90
Stanolind Oil & Gas Co.'s No. 4 J. B. Doby, 1-in. tubing choke, ½ hr. 33
Stanolind Oil & Gas Co.'s No. 4-C J. Dollahite, ¾-in. tubing choke, ½ hr... 13
Texas Co.'s No. 10 E. M. Wood, open tubing 85
Yount Lee Oil Co.'s No. 6 Adrian & McCrary, 11/16-in. tubing choke 54
Atlantic Oil Producing Co.'s No. 14-A S. G. Andrews, open tubing, ½ hr. ... 60
Empire Gas & Fuel Oil Co.'s No. 4 Taylor, open tubing, ¼ hr. 23
Gulf Prod. Co.'s No. 19 Calvin Brown, open tubing 85
Kilgore Ref. Co.'s No. 1 Archanbauch, open tubing, ¼ hr. 15
Sun Oil Co.'s No. 14 M. T. Cole, open tubing 55
Sun Oil Co.'s No. 28 M. T. Cole, open tubing 53
Amada Oil Co.'s No. 3 Jones, open tubing, ¼ hr. 40
Amerada Pet. Corp.'s No. 9 Burnside, open tubing, ¼ hr. 16
Amerada Pet. Corp.'s No. 1 Allen Tooke, open tubing, ¼ hr. 18
Atlantic and Sun Oil Co.'s No. 49 Hayes, open tubing 90
Atlantic and Sun Oil Co.'s No. 55 Hayes, open tubing 85
Atlantic and Sun Oil Co.'s No. 57 Hayes, open tubing 90
Dyck Oil Co.'s No. 7 J. M. Christian, open tubing 98
Galves Oil Co.'s No. 4 Sheppard, open tubing 90
Harry Hanberry's No. 1-C Bray, open tubing, ½ hr. 50
Gilcrease Oil Co.'s No. 2-B A. Tooke, open tubing, ¼ hr. 45
Gilcrease Oil Co.'s No. 3-B A. Tooke, open tubing, ¼ hr. 43
Hawkeye Pet. Co.'s No. 3 M. Bonner, open tubing 72
Heyser & Heard's No. 1 Hindman & Guy, open tubing 90
Monte Oil Co.'s No. 4-B M. Finn, open tubing 85
Bishop Oil Corp.'s No. 6 B. C. Todd, open tubing, ½ hr. 50
Iowa-Payne Oil Co.'s No. 3-I Isley, open tubing 85
Phillips Pet. Co. et al's No. 3 E. M. Wood, open tubing 75
Sabinas Oil Co.'s No. 3-A T. M. Collins, open tubing 75
Shell Pet. Corp.'s No. 9 Stinchcomb, open tubing, ½ hr. 40
Sun Oil Co.'s No. 9 Lodin, open tubing 50
Texas Co.'s No. 9 E. M. Wood, open tubing 80
Yount Lee Oil Co.'s No. 7 L. E. Orms, 11/16-in. tubing choke 61
Atlantic Oil Producing Co.'s No. 13-A S. G. Andrews, open tubing 385
Gulf Prod. Co.'s No. 6 S. B. Hall, open tubing 90
Humble Oil & Ref. Co.'s No. 13 J. A. Knowles, open tubing 50
Humble Oil & Ref. Co.'s No. 38-B S. S. Laird, open tubing 65
National Oil Co.'s No. 2 L. Martin, open tubing 80
Amerada Pet. Corp.'s No. 1 M. T. Cole, open tubing, 20 min. 26
Shell Pet. Corp.'s No. 11-A M. H. Bivens, open tubing, 10 min. 64
Shell Pet. Corp.'s No. 35 J. B. Watson, open tubing, ½ hr. 57
Sinclair Prairie Oil Co.'s No. 39-B A. A. King, open tubing, ½ hr. 30
Sun Oil Co.'s No. 17 M. T. Cole, 1½-in. tubing choke 50
Sun Oil Co.'s No. 11 A. G. Martin, open tubing 50
Tide Water Oil Co.'s No. 4 J. B. Watson, open tubing, 5 min. 5
Titan Oil Co.'s No. 1 E. Still et al, 2 hrs. pumping 40
Arkansas Fuel Oil Co.'s No. 3 W. E. Batten, open tubing, ½ hr. 45
Arkansas Fuel Oil Co.'s No. 8-B D. B. McPherson, open tubing, ½ hr. 40
Arkansas Fuel Oil Co.'s No. 4-A S. G. Smith, open tubing, ½ hr. 40
Atlantic Oil Producing Co.'s No. 7 A. V. Bacle, open tubing 125
Atlantic Oil Producing Co.'s No. 42 Moore, open tubing, ½ hr. 55
Atlantic and Sun Oil Co.'s No. 56 M. Mayes, open tubing 125
Bond & Dillard's No. 14 J. C. Barrett, open tubing, ½ hr. 30
Deep Rock Oil Co.'s No. 7 Jones, open tubing, ¼ hr. 40
Galves Oil Co.'s No. 6 M. O. Sheppard, open tubing 85
J. C. Hawkins' No. 2 Shiloh Lot, open tubing, ½ hr. 41
Humble Oil & Ref. Co.'s No. 12 A. D. Johnson, ¾-in. tubing 75
Lechner & Hubbard's No. 3-A J. B. Doby, open tubing, ½ hr. 40
Woodley-Atlantic and Sun Oil Co.'s No. 9 M. Hayes, open tubing, ¼ hr. 35
Delta Drilling Co.'s No. 2 A. L. Still, by heads 25

General Crude Oil Co.'s No. 4 J. M. Blackman, open tubing 75
Gulf Prod. Co.'s No. 20 G. W. Culver, open tubing 20
Johnston & Owens' No. 5-B M. T. Cole, open tubing, ½ hr. 60
C. H. Lyons' No. 2 Ray, open tubing .. 80
Shell Petroleum Corp.'s No. 3 H. T. Elder, open tubing, ½ hr. 40
Texas Co.'s No. 5 Baxter, open tubing 62
Tide Water Oil Co.'s No. 11 C. G. Storey, open tubing, 5 min. 6

Completions 117
Initial production 6903

RUSK COUNTY

Bay Oil Co.'s No. 7 W. P. Moore, open tubing 88
Friedman Oil Corp.'s No. 2 Howard, open tubing 65
Gulf Prod. Co.'s No. 4 W. A. Hindman, ¾-in. tubing choke 65
Gulf Prod. Co.'s No. 8 Aurelia Laird, open tubing 77
Humble Oil & Ref. Co.'s No. 44-B S. S. Laird, open tubing 80
Humble Oil & Ref. Co.'s No. 47-B S. S. Laird, open tubing 53
Lewis and Selby Oil & Gas Co.'s No. 6 S. B. Wells, open tubing, ¼ hr. 25
Navarro Oil Co.'s No. 5 J. N. Peterson, open tubing 75
Shoreline Oil Co.'s No. 3 Brightwell, open tubing, ½ hr. 50
Tide Water Oil Co.'s No. 7 Wm. Jernigan, open tubing, ¼ hr. 30
Tide Water Oil Co.'s No. 13 E. P. Leverett, open tubing, ¼ hr. 30
American Liberty Oil Co.'s No. 3 W. P. Keeling, open tubing, ¼ hr. 16
Combined Oil Interest's No. 19 G. W. Eaton, open tubing 150
Humble Oil & Ref. Co.'s No. 7 Sol Dennis, open tubing 76
Humble Oil & Ref. Co.'s No. 11 P. R. Guerin, open tubing 74
Humble Oil & Ref. Co.'s No. 21 J. W. Turner, ⅝-in. tubing 75
Sherman Hunt et al's No. 2 W. H. Frederick, 2 hrs. pumping 20
Mid-Kansas Oil & Gas Co.'s No. 65 Grissom, open tubing 100
Pansey Oil Co.'s No. 2 W. S. Frederick, 2 hrs. pumping 20
Perry et al's No. 1 Brown & Chisum .... gas
Sanders et al's No. 1 M. Lee, 28 hrs. ... 150
Sayre Oil Co.'s No. 5 J. P. Cansler, open tubing, ½ hr. 18
Sinclair Prairie Oil Co.'s No. 10-B Mayfield, open tubing, ¼ hr. 30
Willard Oil Co.'s No. 4 J. R. Alford, open tubing, ½ hr. 30
Devonian Oil Co.'s No. 22 R. A. Motley, open tubing 75
Magnolia Pet. Co.'s No. 9 Ben Laird, open tubing, ¼ hr. 20
Navarro Oil Co.'s No. 14 Brightwell, 1⅝-in. tubing choke 60
Max Rubin and Nadel's No. 4 E. Willis, open tubing, ¼ hr. 40
Westheimer & Daube's No. 8 D. M. Peterson, open tubing, ½ hr. 30
Bay Oil Corp.'s No. 6 W. O. Alford, open tubing, ¼ hr. 15
Combined Oil Interest's No. 18 G. W. Eaton, open tubing, ½ hr. 40
Humble Oil & Ref. Co.'s No. 26 S. A. Plowman, open tubing 91
Humble Oil & Ref. Co.'s No. 31 W. L. Price, open tubing 80
Humble Oil & Ref. Co.'s No. 9-A J. H. Silvey, open tubing 92
Humble Oil & Ref. Co.'s No. 18 I. W. Wooley, ⅝-in. tubing 75
Kirby Pet. Co.'s No. 2-B R. P. Grambling, open tubing 125
Mid-Kansas Oil & Gas Co.'s No. 5 H. L. Griffin, open tubing 44
Mid-Kansas Oil & Gas Co.'s No. 58 W. T. Grissom, open tubing 90
Mid-Kansas Oil & Gas Co.'s No. 59 W. T. Grissom, open tubing 136
Mid-Kansas Oil & Gas Co.'s No. 17 Price, open tubing 32
Ortiz Oil Co.'s No. 5 A. Lum. Tolliver, open tubing 50
Pansey Oil Co.'s No. 3 T. J. Cox, open tubing 50
Rogers et al's No. 4 Perry, open tubing 45
Slaughter's No. 1 W. H. Frederick, pumping 2½ hrs. 29
Sun Oil Co.'s No. 7 Alf Lee ..... abd
Venerable & McClanahan's No. 18 J. A. Birdwell, open tubing, ½ hr. 75
Devonian Oil Co.'s No. 23 R. A. Motley, open tubing 90
Houston Oil Co.'s No. 5 D. M. Peterson, open tubing, 20 min. 60
Humble Oil & Ref. Co.'s No. 22 J. N. Peterson, open tubing 85
Magnolia Pet. Co.'s No. 11 J. C. Bradberry, 1-in. tubing choke, ¼ hr. 27
Warren et al's No. 2 Hindman, open-tubing 95
Westheimer & Daube's No. 6 D. M. Peterson, open tubing, ½ hr. 23
American Liberty Oil Co.'s No. 5 E. E. Thrash, open tubing, ¼ hr. 22
British American Oil Co.'s No. 8 Kangerga, open tubing 100
J. L. Collins' No. 3 Dan Kelley, open tubing, ½ hr. 34
Crabtree & Jeffries' No. 5 Giles, open tubing 62
Gant, Garvin & Wegner's No. 2 J. Simmons, by heads per hour 5
Humble Oil & Ref. Co.'s No. 22 Blackwell, open tubing 75
Humble Oil & Ref. Co.'s No. 27-A S. A. Plowman, open tubing 107
Illinois Oil Co.'s No. 4 Florence, open tubing, 20 min. 46
Mid-Kansas Oil & Gas Co.'s No. 6 Joe Mills, open tubing 46
Ortiz Oil Co.'s No. 3-B Tolliver, open tubing 40
Sun Oil Co.'s No. 9 Herdon, per hour pumping 5
Tide Water Oil Co.'s No. 8 M. Thompson, open tubing, ¼ hr. 19
Danciger Oil & Ref. Co.'s No. 3 George Thompson, open tubing 70
Freedman & Swindler's No. 3 Mayfield, 1-in. tubing choke, 50 min. 30
Gulf Prod. Co.'s No. 9 F. Birdson, open tubing 87
Gulf Prod. Co.'s No. 11 Jernigan, open tubing 85
R. C. Lipscomb's No. 1 A. A. King, open tubing, ¼ hr. 25
Magnolia Pet. Co.'s No. 4 M. E. Peterson, open tubing, ¼ hr. 15
Navarro Oil Co.'s No. 13 Brigh well, open tubing, ½ hr. 35
Snowden & McSweeney's No. 13 Roy Laird, open tubing 120
American Liberty Oil Co.'s No. 1 A. O. Spence, 48 hrs. flowing 25
Baldwin & Sutton's No. 2 M. L. Thompson, 3 hrs. 250
Blackwell Oil & Gas Co.'s No. 6 Samp Stone, open tubing, ½ hr. 30
Fox & Butler's No. 4-A Thrash, open tubing, 3 hrs. 200
Gant, Garvin & Wegner's No. 1 Stricklan, pumping per day 75
Peachtree Oil Co.'s No. 4 Ras Pool, per hour pumping 5
W. B. Hamilton's No. 2 M. L. Thompson, open tubing 100
Humble Oil & Ref. Co.'s No. 5 L. Barton, open tubing 89
Humble Oil & Ref. Co.'s No. 32 W. O. Price, open tubing 90
Humble Oil & Ref. Co.'s No. 33 Price, open tubing 97
Lucey Pet. Co.'s No. 8 Maxwell, open tubing 60
Mid-Kansas Oil & Gas Co.'s No. 18 Burton, open tubing 80
Mid-Kansas Oil & Gas Co.'s No. 70 M. M. Cross, open tubing 72
Mid-Kansas Oil & Gas Co.'s No. 66 W. T. Grissom, open tubing 108
Octo Oil Co.'s No. 2 F. J. Cox, open tubing 2 hrs. 180
Ortiz Oil Co.'s No. 3 H. M. Hale, open tubing 20
Shaw & Sheppe' No. 3 H. Stoddard, open tubing 25
Vaughn et al's No. 5 Reagan, open tubing 130
Venable & McClanahan's No. 7 J. A. Flannigan, open tubing, ½ hr. 80

Completions 92
Initial production 6069
Abandoned 1
Gas wells 1

SMITH COUNTY

Gulf Prod. Co.'s No. 8 Jack Wiley, open tubing 85
Gulf State Prod. Co.'s No. 3-A S. S. Cook, open tubing 82
Magnolia Pet. Co.'s No. 2 Roy Loosier, ¾-in. tubing choke, ¼ hr. 30
Stewart & Egan's No. 1 J. C. Bateman, open tubing 75
Stewart Holding Corp.'s No. 4 R. McDavis, open tubing 55
Sun Oil Co.'s No. 5-B A. V. Ritch, open tubing 35
Hunt Prod. Co.'s No. 8-B Fair, open tubing, ¼ hr. 36
Hunt Prod. Co.'s No. 9-B Fair, open tubing, 13 min. 38
H. E. LeMasters' No. 3 T. O. Wright, open tubing 70
Sun Oil Co.'s No. 3 T. O. Wright, open tubing 60
Groveman et al's No. 1 Denton, open tubing 70
Gulf Prod. Co.'s No. 9 Jack Wiley, ¾-in. tubing choke 60
M. H. McMurray's No. 4 G. A. Turner, open tubing 75
Sinclair Prairie Oil Co.'s No. 10 A. Wiley, open tubing, ½ hr. 24

Completions 14
Initial production 795

UPSHUR COUNTY

General Crude Oil Co.'s No. 5 R. Williams, open tubing 50
C. G. Glasscock's No. 3 Webb, open tubing 150
B. F. Phillips et al's No. 1 D. A. Fleet. abd
Rancho Oil Co.'s No. 7 H. W. Moyers, open tubing 70
Sabinas Oil Corp.'s No. 10-C Collins, open tubing 90
Sun Oil Co.'s No. 14 J. Hargraves, open tubing, ½ hr. 22
E. & D. Oil Co.'s No. 1-A J. W. Free, open tubing 65
Elm Oil Co.'s No. 3 E. L. Walker, open tubing 90
Magnolia Pet. Co.'s No. 3 Carrie Brooks, open tubing 90
Phillips & Lawrence's No. 1 D. T. Lloyd, open tubing 85
Steen Drilling Co.'s No. 7 J. F. Phillips, open tubing 70
Stroube & Stroube's No. 12 R. J. Mackey, open tubing 50
Sun Oil Co.'s No. 1-B J. A. Hawkins, open tubing 20
Flannigan Prod. Co.'s No. 4 Fulton, open tubing, ½ hr. 450
General Crude Oil Co. et al's No. 6 R. Williams, open tubing, ¼ hr 21
B. F. Phillips' No. 4 R. R. Cooke, open tubing, ½ hr. 30
Shell Pet. Corp.'s No. 14 C. C. Landers, open tubing, ½ hr. 27
Atlantic Oil Producing Co.'s No. 14 Mager, open tubing 150
Reynolds et al's No. 5 J. T. Miller, ⅝-in. tubing choke 90

Completions 19
Initial production 1620
Abandoned 1

VAN ZANDT COUNTY

L. C. Martin et al's No. 1 S. L. Sanders abd
B. F. Frost et al's No. 1 S. J. Luther... abd
Tim Sharp et al's No. 1-A Cox ..... abd

Abandoned 3

Oklahoma Fields

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Osage	10	3,036	2	0
Creek	19	950	3	1
Payne	1	0	1	0
Lincoln	2	3,722	0	0
Hughes	1	180	0	0
Pontotoc	16	2,585	7	3
Okfuskee	4	53	0	1
Seminole	10	1,618	1	0
Pottawatomie	7	2,181	1	0
Tulsa	5	20	3	1
Okmulgee	12	617	1	1
Muskogee	4	35	2	0
Oklahoma	3	3,043	0	0
Carter	7	1,485	0	0
Stephens	6	13	3	1
Jefferson	3	0	3	0
Grady	1	60	0	0
Marshall	4	127	0	0
Total February	115	19,725	27	8
Total January	157	54,028	40	11
Difference	42	34,303	13	3

Rigs and Wells Drilling

County—	Rigs	Drlg.	Ttl.
Alfalfa	0	1	1
Atoka	1	6	7
Beckham	0	4	4
Blaine	0	1	1
Bryan	1	0	1
Cleveland	1	0	1
Caddo	0	3	3
Carter	7	12	19
Comanche	0	4	4
Cotton	1	1	2
Choctaw	0	1	1
Creek	13	47	60
Dewey	0	1	1
Ellis	0	1	1
Garvin	0	4	4
Grady	0	1	1
Greer	0	1	1
Garfield	1	2	3
Hughes	3	24	27
Jackson	0	1	1
Jefferson	1	5	6
Kay	2	1	3
Kingfisher	0	1	1
Kiowa	0	2	2
Lincoln	11	17	28
Logan	2	9	11
Muskogee	1	11	12
Marshall	0	6	6
Murray	1	1	2
Noble	1	13	14
Okmulgee	5	24	29
Oklahoma	18	18	36
Okfuskee	3	8	11
Osage	14	42	56
Pottawatomie	15	28	43
Pontotoc	0	9	9
Pittsburg	3	4	7
Pushmataha	0	1	1
Payne	1	2	3
Pawnee	2	6	8
Seminole	5	18	23
Stephens	3	12	15
Tulsa	1	12	13
Washita	0	4	4
Wagoner	0	2	2
Total February	117	371	488
Total January	100	362	462
Difference	17	9	26

WELLS COMPLETED

OSAGE COUNTY

28-23- 9 Norbla Oil 1 50
28-23- 9 Bu-Vi-Bar Oil 1-A 50
10-25- 6 Mead Bros. & Beck 1 1400
32-28-11 J. S. Dewar 1 ..... dry
15-24- 7 Prod. & Refs. 3 451
16-24- 7 Champlin Ref. Co. 677
16-24- 7 Kasishke and Lewis Prod. 6 1636
24-24- 7 Kasishke and Higgins 2 ..... abd
16-24- 7 Champlin Ref. 5 853
16-24- 7 Champlin Ref. 6 408

Completed 10
Production 3036
Dry 2

CREEK COUNTY

23-18- 8 Jackson, G. L. Berry 1 40
27-18- 8 Escoe, Gled Oil 5 125
32-18- 8 Beebe, Boyle & Ball 1 ..... dry
27-18- 8 Pine, W. B. Pine 1 40
34-18- 8 Tiger, Kilgore et al 4 50
17-17-10 Kelso, Caprock Oil 1 5
36-16- 7 Big Pond, Devonian Oil 5 125
3-18- 8 Grayson, Roy Dean et al 2 .. 40
3-15- 7 White, Wallace et al 1 ..... abd
36-17-11 Harwell, Sherry & Murta 1-A. gas
22-18- 8 Tiger, C. O. Buckles 5 35
34-18- 8 Wilson Marrs et al 6 100
34-18- 8 Unallotted, Todd & Willough-by 3 40
34-18- 8 Wilson, F. O. Akin et al 12 .. 75
10-17- 8 Watson, Doke & Hughes 1 .. 25
9-16- 9 Renfro, Ed Smith et al 1 .... dry
16-18- 8 Swingle, W. O. Moore et al 1. 75
34-18- 8 Rentie, Doke & Hughes 3 100
3-17- 8 Fee, Magnolia Pet. 1 75

Completed 19
Production 950
Dry 3
Gas 1
Gas production 2,000,000

PAYNE COUNTY

25-17-6 Lingren, Kemp & Nunally 1 .. dry

LINCOLN COUNTY

11-14-3 Brill, Amerada and Stanolind 2 3682
2-14-3 Rowley, Phillips Pet. 1 40

Completed 2
Production 3772

HUGHES COUNTY

20-7-8 Campbell, Jarvis & Holm 2 140
22-7-8 Moore, L. M. Rouch 1 30
15-7-8 Haskett, Troup & O'Connor 5 .. 10

Completed 3
Production 180

PONTOTOC COUNTY

25-5-4 Gray, Moore et al 2 780
25-5-4 Burke, Patsy Oil 2 500
28-4-6 Reeves, Hercules Gas Co. 1-A .. gas
30-2-7 Hardin, W. A. Delaney 1 600
32-5-5 Boyd, Superior Oil 1 45
25-5-8 Jones, H. & M. Drlg. Co. 1 .... abd
19-2-6 Mayhue, W. E. McCraw 1 ..... dry
30-3-7 Hardin, W. A. Delaney 1 ..... gas
25-5-4 Burke, Lake Oil 3 550
22-5-6 Jackson, Meyers et al 1 ..... dry
27-5-6 Hart, Barnsdall Oil 2 ..... dry
27-5-6 Brown, Moore et al 1 10
21-5-8 Butler, Gilbreath 1-A ..... dry
33-3-4 Kroth, Williams 1 ..... dry
8-3-6 Simmons, Flowers et al 1 ..... dry
6-3-7 Rieves, Hager et al 1 ..... gas

Completed 16
Production 2485
Dry 7
Gas 3
Gas production 16,000,000

OKFUSKEE COUNTY

2-10- 9 Deer, Robinson et al 4 10
13-11-11 Hen, Stekoll et al 1-A 8
25-10-10 Lashley-B. Helmerich & Payne 1 ..... gas
2-10-11 Johnson, W. E. Fleming 4 35

Completed 4
Production 53
Gas 1
Gas production 35,000,000

SEMINOLE COUNTY

1-8-6 Tiger, Sinclair Prairie 2 180
30-8-8 Davis, Mid-Kansas 7 185
15-7-8 Pickens, Elliott and Shell Pet. 2 100
22-7-8 Petete, Kent & Preston 2 109
29-7-8 Harjo, Winona Oil and Jarvis & Holm 1 120
36-6-7 Block 3, Keyokla Pet. 1 141
20-9-6 Harjo, Inglehart et al 1-A 10
15-8-8 Harper, Burke Greis Oil 1 ..... dry
29-7-8 Amery, Winona and Jarvis & Holm 2 50
2-9-6 H. Joe, Carter Oil 1 723

Completed 10
Production 1618
Dry 1

POTTAWATOMIE COUNTY

33-7-4 Brown, Hall & Briscoe 4 938
27-7-4 Sullivan, Moebris et al 1 40
35-7-4 Monnett, Carter Oil 2 252
4-7-4 McGee, Keyokla Oil 1 427
4-8-3 Terfertiller, Texas Co. 1 ..... dry
32-7-4 Lowther, Vaugh et al 3 60
2-6-4 Lucas et al 1 464

Completed 7
Production 2181
Dry 1

TULSA COUNTY

5-17-14 Hodge, H. W. Bowder 3 20
6-17-14 Tamle, E. Eppler 2 ..... dry
11-17-14 Childers, Compton & Bright 1 dry
8-17-14 Hodge, F. D. Misener 4 ..... gas
32-19-11 Partridge, O. M. Ireland 2 .... dry

Completed 5
Production 20
Dry 3
Gas 1
Gas production 5,000,000

OKMULGEE COUNTY

12-15-12 Fisher, Claremont Oil 4 200
22-13-14 Fox, Penrod et al 1 150
22-13-14 Manuel, Gled Oil 1-A 150
15-14-14 Bassett, J. E. Wallace 9 10
27-16-13 Barnett, Bryan Pet. 1 ..... gas
29-14-14 Ashley, Francis Oil 1-A 10
26-15-11 Johnson, Beal & Berryhill 1 .. dry
16-15-14 Rowe, Jack Summers 1 17
28-15-14 Larney, J. Delaney 2-A 20
25-14-11 Doyle, Pringle et al 1 40
30-14-12 Ragsdale, Colton and Phillips Pet. 2 12
25-12-13 Byrd, Fred Miller 1-A 8

Completed 12
Production 617
Dry 1
Gas 1
Gas production 9,000,000

MUSKOGEE COUNTY

8-15-18 Spaulding, H. L. Jolley 2 .... dry
33-15-15 Jefferson, Rose et al 1 25
14-15-17 Harrod, R. E. Godfrey 1 ..... dry
8-15-18 Patterson, J. M. Foltz 2 10

Completed 4
Production 35
Dry 2

OKLAHOMA COUNTY

26-11-3w Jarvis, I. T. I. O. 2, 4 hrs. .. 631
26-11-3w South Glendale, I. T. I. O. 3 4 hrs. 1011
34-12-3w Okla. City, Helmerich & Payne 1, 4 hrs. 1401

Completed 3
Production 3043

CARTER COUNTY

4-1s-3w Perkins, Carter Oil 2 20
14-1s-3w Lucas, Manson Oil 1 10
19-1s-2w Hooks-Mitchell, Amos Drlg. Co. 1 900
8-2s-2w Krieger, Carter Oil 1 150
25-1s-2w Majora, Daphine Oil 4 220
31-1s-2w Lynn, Carter Oil 3 154
3-1s-3w Fee, Walter Neustadt 3 31

Completed 7
Production 1185

STEPHENS COUNTY

15-1n-4w McKimmon, Lloyd Oil 1 .... abd
26-1s-5w Woods, Mudge Oil 24 ..... abd
26-1s-5w Woods, Mudge Oil 25 ..... gas
26-1s-5w Woods, Mudge Oil 28 6
9-3s-5w McLendon, Owl Oil 7 ..... dry
24-2s-4w Harley, Skelly Oil 22 7

Completed 6
Production 13
Dry 3
Gas 1
Gas production 1,500,000

JEFFERSON COUNTY

16-7s-5w Black, Hughes et al 1 ..... dry
35-6s-5w Seay, Keil & Wiley 2 ..... dry
17-7s-5w Peneston, Jones et al 1 ..... dry

Completed 3
Dry 3

GRADY COUNTY

8-3n-5w Horton, Carter Oil 4 60

MARSHALL COUNTY

25-7s-5e Burge, Mitchell & Kilbourne 1. 7
25-7s-5e Little, C. H. Chatfield 3 30
3-7s-6e McDuffie, Abe Wallack 3 20
25-8s-5e Sullivan, Harry Ables 2 70

Completed 4
Production 127

Kansas Fields

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Rice	8	5,949	1	0
Reno	2	1,573	0	0
Elk	2	20	0	1
Sedgwick	3	382	3	0
Greenwood	T	185	2	0
Butler	1	0	1	0
McPherson	13	6,646	1	0
Harvey	8	7,482	0	0
Woodson	2	62	0	0
Stafford	1	0	1	0
Edward	1	0	1	0
Coffey	1	0	1	0
Cowley	1	0	0	1
Total February	50	22,299	11	3
Total January	75	20,044	28	2
Difference	25	2,255	17	0

Rigs and Wells Writling

County—	Rigs	Drlg.	Ttl.
Greenwood	1	7	8
Butler	1	3	4
Marion	0	1	1
Sedgwick	1	8	9
McPherson	13	30	43
Harvey	6	19	25
Rice	11	19	30
Ellsworth	0	2	2
Barton	1	5	6
Russell	1	4	5
Reno	3	11	14
Stafford	0	4	4
Ellis	0	2	2
Rush	1	1	2
Finney	0	1	1
Kingman	0	4	4
Phillips	0	1	1
Rooks	0	2	2
Trego	0	1	1
Total February	39	125	164
Total January	39	133	172
Difference	0	8	8

WELLS COMPLETED

RICE COUNTY

31-19-9w McFarland, Ramsey et al 1 .. 900
21-20-10w Binger, Holbart Oil 1 556
5-20-9w Proffit, Mid-Kansas O. & G. 2 823
27-18-10w Orth, Slick, Pryor & Lockhart 2 ..... dry
6-20-9w Chris.opher, Gypsy Oil 2 ..1453
16-20-11w Gerlof, Stanolind 2 189
18-20-9w Malone, Gypsy Oil 2 1692
27-18-10w Habinger, Slick, Pryor & Lockhart 336

Completed 8
Production 5949
Dry 1

RENO COUNTY

1-23-4w Haury, Study & Frost 3 ... 770
36-23-4w Stucky, Texas Co. 1 803

Completed 2
Production 1573

ELK COUNTY

26-31-10 Hull, Central States 1 ..... gas
22-30-8 Ferguson, Barker & Morgan 2 20

Completed 2
Production 20
Gas 1
Gas production 500,000

COWLEY COUNTY

2-32-2 Kelly, Deal et al 1 ..... dry

SEDGWICK COUNTY

14-26-2 Hamant, Gypsy Oil Co. 10 382
31-26-2w Stockman, Wentz et al 1 .... dry
11-26-1e Funk, Cameron et al 1-A ... dry

Completed 3
Production 382
Dry 3

GREENWOOD COUNTY

15-25-11 Prather, Ward McGinnis 1-A . 50
6-24-12 Smith, Henderson & Holden 2 dry
36-24-10 Jones, Phillips Pet. 5 10
27-22-11 Wick, Skelly-Tidal 22 50
8-24-1w Smith, A. M. Landon et al 6. 15
8-24-12 Wilson, Matthews & Rex 4... 60
20-25-11 Garrison, DeGenther et al 1 . dry

Completed 7
Production 185
Dry 2

BUTLER COUNTY

20-26-7 Ow, National Ref. 1-A ..... dry

McPHERSON COUNTY

28-20-3w Stucky, Sinclair Prairie 2 ... 232
33-20-3w Stucky, Gypsy Oil Co. 3 541
29-19-1w Whittall, Keys Pet. 1 90
33-21-1w Friesen, Mabee & Shell Pet. 6 1975
32-20-3w McCurdy, Sinclair Prairie 7.. 619
14-19-2w Griffin, McBride, Inc. 3 852
23-19-2w Russell, Helmerich & Payne & Shell 2 470
24-19-2w Lovett, Gypsy Oil Co. 4 562
24-19-2w Grattan, Larlo O. & G. (OWDD) 2 391
25-18-2w Wiles, Phillips Pet. 3 89
25-19-2w Krehbeil, Wolf Creek O. & G. 1 (OWDD) 414
28-19-1w Doane, Darby Pet. 2 411
27-20-3w Stucky, Slick, Pryor & Lockhart 4 ..... dry

Completed 13
Production 6646
Dry 1

HARVEY COUNTY

4-22-3w Schroeder, Texas Co. 1 700
8-22-3w Androes, Texas Co. 147
19-22-3w Martens, Mabee & Shell Pet. 3 1691
20-22-3w Schmidt, Magnolia Pet. 4 955
30-22-3w Klassen, Mid-Kansas 1 1525
30-22-3w Klassen, Mid-Kansas 2 1077
19-22-3w Martens, Producers & Refiners 5 440
8-22-3w Nikkell B. Mabee & Shell ... 947

Completed 8
Production 7482

WOODSON COUNTY

19-25-14 Aikens, Sheedy et al 2 60
6-24-14 Winterschied, Oko Oil 4 42

Completed 2
Production 62

STAFFORD COUNTY

18-22-11w Willinger, Atlantic O. P. 1 .. dry

EDWARDS COUNTY

1-24-16w Bradbridge, Atlantic O. P. 1. dry

COFFEY COUNTY

12-23-14 Vanocker, Hinxe et al 2 ... dry

COWLEY COUNTY

10-32-5 Moffitt, A. D. Crow 1 ..... gas

North Central Texas Fields

Summary of Wells Completed

County—	Comp.	Prod.	Abd.	Gas
Archer	61	7,235	23	0
Brown	9	82	3	2
Callahan	4	15	3	0
Coleman	7	45	3	3
Cooke	2	20	1	0
Comanche	1	0	1	0
Denton	1	0	1	0
Eastland	2	10	0	1
Jack	2	1,200	0	0
Montague	3	295	0	0
Palo Pinto	2	0	2	0
Shackelford	16	416	9	0
Stephens	1	0	1	0
Taylor	1	0	1	0
Wichita	1	0	1	0
Wilbarger	3	116	1	0
Young	33	1,118	16	0
Total February	149	10,553	66	6
Total January	160	12,029	54	6
Difference	1	1,476	12	0

Summary of Rigs and Wells Drilling

County—	Rigs	S.D.	Drlg.	Ttl.
Archer	11	5	65	81
Baylor	0	1	3	4
Brown	3	2	2	7
Callahan	0	3	2	5
Clay	1	0	2	3
Coleman	1	1	4	6
Eastland	2	2	4	8
Erath	0	1	0	1
Foard	0	2	2	4
Grayson	1	2	2	5
Jack	2	2	4	8
Johnson	0	3	0	3
Montague	1	2	3	6
Palo Pinto	2	1	3	6
Parker	0	2	0	2
Shackelford	3	5	12	20
Stephens	2	3	4	9
Taylor	0	1	3	4
Throckmorton	1	1	2	4
Wichita	0	2	4	6
Wilbarger	2	3	4	9
Wise	0	1	0	1
Young	12	5	35	52
Total February	44	50	160	254
Total January	51	58	132	241
Difference	7	8	28	13

WELLS COMPLETED

ARCHER COUNTY

L. T. Burns and C. B. Long's No. 1 Mankins 15
F. P. Cullum's No. 13 Falls-Ellis ..... abd
R. P. Dorian's No. 1 W. S. Ikard ..... abd
Fains & McGaha's No. 1 Mangold ..... abd
G. I. Oil Co.'s No. 1 Perkins 235
G. I. Oil Co.'s No. 3 Perkins 83
W. B. Hamilton's No. 5 Abercrombie ... 181
Krahenbuhl and Bradley's No. 1 Taylor abd
Perkins and Cullum's No. 8 Hanzen .. 74
Pois and Schultz' No. 16 Green 1000
Simms Oil Co.'s No. 1-A Bell County School Lands ..... abd
Simms Oil Co.'s No. 1 Elta Faber ..... abd
S. V. White's No. 1 Holsek ..... abd
C. W. Boller et al's No. 19-A Perkins.. 95
Bridwell Oil Co.'s No. 2-E Falls County School Lands 700
Burns and Long's No. 4 Mankins 5
F. P. Cullum's No. 11 Falls-Ellis 70
Cullum and Alexander's No. 5 Falls-Gulf 260
W. B. Hamilton's No. 10 Coffield 700
W. B. Hamilton's No. 11 Pace 12
W. L. Hawkins' No. 3 W. P. Pace 10
Humble O. & R. Co.'s No. 1-A Longley ..... abd
J. C. Jennings et al's No. 1 Bridwell .. abd
Jess Lincoln's No. 7 Ray 74
M. H. Martin & Sons' No. 1 McAnally .. abd
Palmer and Burch's No. 1 O'Donhoe .. abd
Perkins and Cullum's No. 9 Hanzen ... 75
Simms Oil Co.'s No. 1-B Perkins 30
Texas Co.'s No. 3 Anderson 25
J. Stump's No. 6-B Wilson ..... abd
C. W. Boller's No. 7-A Perkins 200
Burns and Long's No. 2 Mankins 5
Burns and Long's No. 3 Mankins ..... abd
C. W. Carey's No. 2 Falls County School Lands 14
Continental Oil Co.'s No. 4-E Falls County School Lands 22
W. R. Cooper's No. 5 S. B. Hamilton .. 200
W. B. Hamilton's No. 2-I Graham ..... abd
W. B. Hamilton's No. 2-L Graham .... abd
W. B. Hamilton's No. 1-A Longley 98
W. B. Hamilton's No. 3-A Longley 70
W. B. Hamilton's No. 10 Pace 82
Krahenbuhl and Bradley's No. 1 Canington 15
Peckham et al's No. 1 Neale ..... abd
Perkins and Cullum's No. 10 Boyles .. 20
Petroleum Producers Co.'s No. 3 Richardson 30
Texas Plains Oil Co.'s No. 1-B Garvey.. abd
Bridwell Oil Co.'s No. 3-E Falls 300
L. T. Burns' No. 1 Coffield ..... abd
Fain & McGaha's No. 2 Morrison ..... abd
Fain & McGaha's No. 16 Logan 100
G. I. Oil Co.'s No. 1 J. J. Perkins 15
Golding and Cochran's No. 1-A Perkins. abd
G. I. Oil Co.'s No. 4 Perkins 75
Gray Drilling Co.'s No. 3 Ferguson 30
James H. McCamey's No. 1 Garvey ... abd
Parsons and Silkwood's No. 1 Carter .. abd
Perkins and Cullum's No. 7 Boyles 225
Perkins and Cullum's No. 8 Boyles 1165
Perkins and Cullum's No. 11 Boyles ... 125
Petroleum Producers Co.'s No. 4 Richardson 100
Gordon T. West's No. 2 Ray ..... abd

Completions 61
Initial production 7235
Abandoned 23

BROWN COUNTY

S. Owens' No. 1 Whiteside ..... abd
Shead-Simmons and French's No. 1 Reaves 20
Jane-Ellen Gas Co.'s No. 1 Charles Griffin ..... gas
George Lamb and Fred Turner's No. 1 F. M. Turner ..... abd
M. L. Richards' No. 1 L. G. Giddings .. abd
Shead-Simmons and French's No. 1-A Reaves 15
Lewis Green's No. 2 F. E. Gordon 8
Janellen Oil Co.'s No. 1 S. C. Hutchinson ..... gas
S. B. Owens' No. 12 R. Lynch 40

Completions 9
Initial production 83
Abandoned 3
Gas 2

CALLAHAN COUNTY

Atkinson and Sandifer's No. 1 I. N. Jackson 15
Grilling et al's No. 1 S. F. Ingram .... abd
Ungren and Frazier and Byron's No. 1-20 Jackson ..... abd
Frank Kirk et al's No. 1 J. C. Dyer .. abd

Completions 4
Initial production 15
Abandoned 3

COLEMAN COUNTY

Arcadia Refining Co.'s No. 2 C. M. Moore ..... gas
W. J. Armstrong's No. 1 W. A. Gray ... gas
Centennial Oil & Gas Co.'s No. 1 W. E. Fisher ..... abd
H. Winters' No. 1 D. E. Purcell ..... abd
Armstrong et al's No. 1 Grayson ..... gas
Centennial Oil & Gas Co.'s No. 1 Brooks and Burleson ..... abd
Ott Engle's No. 1 Carl Williams 45

Completions 7
Initial production 45
Abandoned 3
Gas 3

COOKE COUNTY

George L. Pace's No. 3 H. L. Dennis .. 20
John Gray's No. 1 Felker ..... abd

Completions 2
Initial production 20
Abandoned 1

COMANCHE COUNTY

R. T. Hull et al's No. 1 R. W. Gray .. abd

Abandoned 1

DENTON COUNTY

W. H. Russell and Vern Clopton's No. 1 Gregory ..... abd

Abandoned 1

EASTLAND COUNTY

Hoffman and Page's No. 7 J. Harbin .. 10
Hickok Dev. Co.'s No. 1 J. T. Stamps.. gas

Completions 2
Initial production 10
Gas 1

JACK COUNTY

Brazos River Gas Co.'s No. 3-B Keyser. 400
Brazos River Gas Co.'s No. 1 King 800

Completions 2
Initial production 1200

MONTAGUE COUNTY

Bridwell Oil Co.'s No. 2 B. Bigley 45
Arco Oil Co.'s No. 6 R. W. Cunningham 17
Bridwell Oil Co.'s No. 1-B Lay 233

Completions 3
Initial production 295

PALO PINTO COUNTY

Root and Rhoads' No. 4 Costello ..... abd
W. K. Gordon's No. 1 John McClure ... abd

Abandoned 2

SHACKELFORD COUNTY

Clay Dome Oil Co. et al's No. 1 Jeter.. abd
A. C. Walker's No. 3 B. S. Walker 6
Freeman-Hampton's No. 3 J. P. Morris abd
L. A. Grelling's No. 1 W. Y. and R. A. Davis ..... abd
Albany Oil Co.'s No. 8 E. Jeter 75
Callahan and Brewer's No. 7 Jeter ... abd
Dean and Atkinson's No. 1 W. P. Newell 20
B. Dilbeck's No. 1 N. M. Mills ..... abd
Gilman and McMurray's No. 2-B Jeter. abd
Knight's No. 4 E. A. Jeter 100
Owens-Snebold's No. 1 W. D. Reynolds. 100
Roeser and Pendleton's No. 8-201 Morris Buie 65
Roeser and Pendleton's No. 1-B Reynolds ..... abd
John H. Sedwick's No. 1 W. P. Newell. abd
Roy Shyrock et al's No. 2 Brooks .... abd
Worth Petroleum Co.'s No. 2 Jeters ... 50

Completions 16
Initial production 416
Abandoned 9

STEPHENS COUNTY

Shertzer Bros.' No. 5 S. Stewart ..... abd

Abandoned 1

TAYLOR COUNTY

E. Guthrie's No. 1 Clem Smith ..... abd

Abandoned 1

WICHITA COUNTY

A. T. Wolfe's No. 3-A Daume ..... abd

Abandoned 1

WILBARGER COUNTY

Stanolind O. & G. Co.'s No. 4-A Waggoner ..... abd
Atlantic Oil Prod. Co.'s No. 15 Leds-Waggoner 100
W. B. Hamilton's No. 4-L Waggoner .. 16

Completions 3
Initial production 116
Abandoned 1

YOUNG COUNTY

Beavers-White and Duncan's No. 1 Remington 40
Ed Bradshaw's No. 1 Speer ..... abd
F. H. E. Oil Co.'s No. 3 Stewart ..... abd
Henson and Tidwell's No. 5 James 30
Petroleum Producers Co.'s No. 3 Burris 15
Pitzer and West's No. 4-A Williams ... 35
Sarns and Watkins' No. 1 Cullers 6
A. H. and S. P. Schmitt's No. 2 Casey.. abd
White and Duncan's No. 1 Howard .... abd
D. L. Wolfe's No. 1 Spearman ..... abd
Big "G" Oil & Gas Co.'s No. 1 Ball .. abd
Brazelton and Sheldon's No. 1 Barnett. abd
F. H. E. Oil Co.'s No. 3 Jones 1
Fresno Oil Co.'s No. 1 Baldwin 5
King Royalty Co.'s No. 11-B Johnson .. abd
L. A. Long's No. 1-E Williams 500
Petroleum Producers Co.'s No. 3 Burris. 15
Producers Supply & Tool Co.'s No. 12 Finch 15
Texas Co.'s No. 8-A Finch ..... abd
Belknap Oil Co.'s No. 6-B Belknap Coal Co. 100
Fred Clairda's No. 1 fee ..... abd
Golding and Cochran's No. 1 Finch .... abd
Holbrook and Wood's No. 12 Cullers .. 10
Invincible Oil Co.'s No. 1 Morrison 6
C. J. Kleiner's No. 6 Belknap Coal Co. 100
C. J. Kleiner's No. 8 Belknap Coal Co. 200
William Nichols' No. 1 Routan ..... abd
William Nichols' No. 2 Routan ..... abd
T. S. Shaw Oil Corp.'s No. 4 Marshall.. 25
Sheldon and Brazelton's No. 1 Barnett and Gibbs ..... abd.
King Royalty Co.'s No. 13-A Johnson.. 15
Petroleum Producers Co.'s No. 4 Burris. abd
D. L. Wolfe's No. 1 Graves ..... abd

Completions 32
Initial production 1118
Abandoned 16

Panhandle Fields

Summary of Wells Completed

County—	Comp.	Prod.	Abd.	Gas
Carson	6	345	0	2
Gray	23	9,478	0	0
Hutchinson	7	259	1	2
Moore	2	5	0	1
Wheeler	5	520	0	3
Total February	43	10,607	1	8
Total January	23	5,005	1	1
Difference	20	5,602	0	7

Summary of Rigs and Wells Drilling

County—	Rigs	S.D.	Drlg.	Ttl.
Carson	2	1	5	8
Childress	1	2	0	3
Gray	10	5	25	40
Hutchinson	2	1	20	23
Hemphill	0	1	0	1
Moore	1	3	2	5
Roberts	0	1	0	1
Wheeler	3	2	13	18
Total February	19	15	65	99
Total January	30	12	61	103
Difference	11	3	4	4

WELLS COMPLETED

CARSON COUNTY

Huber Pet. Co.'s No. 1 Burnett ..... gas
Magnolia Pet. Co.'s No. 8 fee ..... gas
Sinclair Prairie Oil Co.'s No. 4 McConnell (old well deepened) 5
Skelly Oil Co.'s No. 24 Schaffer 115
Skelly Oil Co.'s No. 25 West Schaffer.. 190
Skelly Oil Co.'s No. 26 West Schaffer .. 35

Completions 6
Initial production 345
Gas wells 2

GRAY COUNTY

Chism et al's No. 2 Carpenter ..... gas
Skelly Oil Co.'s No. 1-B Webb 755
Continental Oil Co.'s No. 4 Wright 676
Danciger Oil & Ref. Co.'s No. 3-A Wright 240
Phillips Pet. Co.'s No. 5 Jackson (old well deepened) 100
Sinclair Prairie Oil Co.'s No. 6 Worley. 760
Sinclair Prairie Oil Co.'s No. 6 Leycomb 762
Skelly Oil Co.'s No. 6 Vickers 270
Texas Co.'s No. 11 Faulkner 555
Bell Oil & Gas Co.'s No. 2 Morse 25
Denworth Oil Co.'s No. 3 Webb 150
Mid-Kansas Oil & Gas Co.'s No. 4 Webb. 305
Skelly Oil Co.'s No. 4-A Webb 100
Texas Co.'s No. 1 Shark 225
Texas Co.'s No. 2 Williams (old well deepened) 25
Eban Warner's No. 1 Webb (old well deepened) 2700
Panco Oil Co.'s No. 1 Meers 135
Skelly Oil Co.'s No. 7 Vicars 230
Skelly Oil Co.'s No. 8 Vicars 325
Southern Pet. Expl. Co.'s No. 3 Baird. 320
Sunray Oil Co.'s No. 7 Cook-Faulkner (old well deepened) 348
Texas Co.'s No. 10 Bowers (old well deepened) 325
Texas Co.'s No. 8 Comba-Worley (old well deepened) 100

Completions 23
Initial production 9478

HUTCHINSON COUNTY
Deal Oil & Gas Co.'s No. 2 Sanford ... gas
Dixon Creek Oil & Ref. Co.'s No. 1 Cockrell ... 160
Phillips Pet. Co.'s No. 1 Sanford ... gas
Phillips Pet. Co.'s No. 2 Yake ... 44
D Rubin et al's No. 1 fee ... abd
Sinclair Prairie Oil Co.'s No. 3 Merchant 25
Travelers Oil Co.'s No. 1 Haile ... 30

Completions ... 7
Initial production ... 259
Abandoned ... 1
Gas wells ... 3

MOORE COUNTY
Shamrock Oil & Gas Co.'s No. 1-A Burnett ... gas
Shamrock Oil & Gas Co.'s No. 1 Robertson ... 5

Completions ... 2
Initial production ... 5
Gas wells ... 1

WHEELER COUNTY
Dyke Oil Co.'s No. 1 Wingo ... gas
Martin & Dubois' No. 1 Farren ... gas
Piney Oil & Gas Co.'s No. 2 Koons ... 120
Remo Oil Co.'s No. 2 Sloss & Admire (old well deepened) ... 460
Devore & Robinson's No. 2 Setter ... gas

Completions ... 5
Initial production ... 520
Gas wells ... 3

Southwest Texas Fields

Summary of Field Operations

Field—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Cedar Creek .	2	500	1	0	1	1	2
Hilbig ...	1	0	1	0	0	0	0
N. Dale ...	2	720	1	0	0	3	3
Eckert ...	1	8	0	0	0	3	3
Tuleta ...	1	0	1	0	0	0	1
Webster ...	1	0	1	0	0	1	1
Eagle Hill ...	3	300	0	0	1	2	3
N. Gov. Wells	23	6,308	1	2	4	12	16
Sarnosa ...	1	50	0	0	0	0	0
S. Gov. Wells	7	2,375	1	0	1	2	3
Ignacio ...	1	0	1	0	0	1	1
E. Cole ...	1	0	0	1	0	1	1
Laurel ...	1	0	0	1	0	0	0
Carolina-Tex.	1	0	1	0	0	0	0
Byersville ...	2	25	1	0	0	1	1
Escobas ...	5	160	2	0	0	2	2
Pettus ...	1	0	1	0	0	0	0
Cuevitas ...	3	400	0	2	1	0	1
W. Cole ...	3	215	0	0	0	2	2
E. Cole ...	1	0	0	1	0	0	0
Miscellaneous.	28	50	26	1	21	76	97
Total Feb. .	89	11,111	39	8	29	107	136
Total Jan. .	113	15,130	58	7	24	112	136
Difference..	24	4,019	19	1	5	5	0

WELLS COMPLETED

CEDAR CREEK FIELD—BASTROP COUNTY
Am. Nat. Bank, Cole Pet. Co. 3 ... abd
Reyes, Marts & Beavens 6 ... 500

HILBIG FIELD—BASTROP COUNTY
Beck, Humble Oil & Ref. Co. 2 ... abd

N. DALE FIELD—BASTROP COUNTY
Talley, Ogden & Reed 1 ... 720
Miears, Marts & Beavens 1 ... abd

ECKERT FIELD—BEXAR COUNTY
Sandemer, Tio Oil Corp. 7 ... 8

TULETA FIELD—BEE COUNTY
Rapp & Hatch, Garland Clymore 1 ... abd

WEBSTER FIELD—CALDWELL COUNTY
McCrory, C. J. Webster 2 ... abd

EAGLE HILL FIELD—DUVAL COUNTY
Foster, S.R.&C. Oil Co. 5 ... 30
Foster, S.R.&C. Oil Co. 4 ... 120
Duval Co. Ranch Co., Al Buchanan 3 ... 150

N. GOVT. WELLS—DUVAL COUNTY
Duval Co. Ranch Co., Magnolia Pet. Co. 15 ... 150
Weiderkehr, Sun Oil Co. 20 ... 96
Weiderkehr, Sun Oil Co. 21 ... 85
Weiderkehr, Sun Oil Co. 22 ... 85
Weiderkehr, Sun Oil Co. 24 ... 240
Weiderkehr, Sun Oil Co. 26 ... 150
Hahl, Sun Oil Co. 28 ... 60
Weiderkehr, Sun Oil Co. 30 ... 308
Weiderkehr, Sun Oil Co. 31 ... 1152
Weiderkehr, Sun Oil Co. 34 ... 50
Weiderkehr, Sun Oil Co. 27 ... 484
Weiderkehr, Sun Oil Co. 23 ... 552
Weiderkehr, Sun Oil Co. 25 ... 600
Duval Co. Ranch Co., Magnolia Pet. 2. 150
Lundell, Magnolia Pet. Co. 5 ... 150
Duval Co. Ranch Co., Magnolia Pet. 17 100
Johnson, Texas Co. 10 ... gas
Fee, Texas Co. 4 ... 1104
Hahl, Humble Oil & Ref. Co. 30 ... 480
Hahl, Humble Oil & Ref. Co. 31 ... abd
Webb, Viola Oil Co. 2 ... gas
Duval Co. Ranch Co., Reynosa Oil Co. A-7 ... 168
Hahl, Russ Pet. Co. A-4 ... 144

SARNOSA FIELD—DUVAL COUNTY
Ruiz, Magnolia Pet. Co. 5 ... 50

S. GOVT. WELLS—DUVAL COUNTY
White, Humble Oil & Ref. Co. 17 ... 18
Lundell, Magnolia Pet. Co. 6 ... abd
State, Cox & Hamon 1 ... 600
Lundell, Smith & Storey 6-A ... 100
Lundell, Magnolia Pet. Co. 4 ... 145
Lundell, Rodney Delange 4 ... 1440
Webb, Violet Oil Co. 2 ... 72

IGNACIO FIELD—DUVAL COUNTY
Rodriquez, Texas Co. 1 ... abd

E. COLE FIELD—DUVAL COUNTY
S. Benavides, Cole Pet. Co. 2 ... gas

PETTUS FIELD—GOLIAD COUNTY
Ray, United Prod. Co. 2 ... abd

CUEVITAS FIELD—STARR COUNTY
Guerra, Sun Oil Co. A-7 ... 400
Guerra, Sun Oil Co. C-3 ... gas
Guerra, Sun Oil Co. C-4 ... gas

W. COLE FIELD—WEBB COUNTY
Benavides, Cole Pet. Co. 81 ... 80
Benavides, Cole Pet. Co. 82 ... 60
Benavides, Magnolia Pet. Co. 2 ... 75

E. COLE FIELD—WEBB COUNTY
Bruni, Allen & Morris 1 ... gas

LAUREL FIELD—WEBB COUNTY
Rosenberg, South Texas Oil Co. 18 ... gas

CAROLINA-TEXAS FIELD—WEBB COUNTY
Benavides, Carolina-Texas Oil & Gas Co. 11 ... abd

BYERSVILLE FIELD—WILLIAMSON COUNTY
Johnson, Fritz Fuch 1 ... abd
Reiger, Taylor Prod. Co. 1 ... 25

ESCOBAS FIELD—ZAPATA COUNTY
Whitehead, Texas Co. 40 ... 50
Gutierrez, Allied Gas & Oil-Allen & Morris 40 ... 75
Whitehead, Texas Co. 38 ... abd
Gutierrez, Allen & Morris 41 ... 35
Garza, French Oil Corp. 1 ... abd

Wells completed ... 61
Production ... 11,061
Tests abandoned ... 13
Gas production ... 104,500,000

Miscellaneous Counties

BASTROP COUNTY
Franks, T. T. Word 1 ... abd
Page-Probst, Sun Oil Co. 1 ... abd

BEXAR COUNTY
Jackel, W. W. Umburn 1 ... abd
Hoch estate, C. I. Albertson 2 ... abd

BLANCO COUNTY
Dittmar, Blanco County Dev. Co. 1 ... abd

CALDWELL COUNTY
August, Hope & Cole 1 ... abd

DUVAL COUNTY
Herbst, Eaton et al 1 ... abd
Wood-Welder, O. W. Killam A-3 ... abd

HIDALGO COUNTY
Fee, Daskom Bros. 1 ... abd

JIM HOGG COUNTY
Vela, Clark & Cowden Drlg. Co. 3 ... abd
Lopez, DeWitt C. DeWitt 1 ... abd
Saunders, Jay E. Jones 1 ... abd

JIM WELLS COUNTY
Seeligson, Trinity Drillers 1 ... 50

KERR COUNTY
Love, Evans & Gant 1 ... abd

LIVE OAK COUNTY
Armstrong, Stuart Mossom 1 ... abd
Nichols, W. P. Howard 2 ... abd
Reiffert, Loma Oil Co. 1 ... abd

McMULLEN COUNTY
Two Rivers Ranch, Two Rivers Oil 2 .. gas
Bremer, Snider, Whisenant & Trenchard 1 ... abd
Hagist, Paul Teas 4 ... abd
Hagist, Lefevre & Spice 1 ... abd

MEDINA COUNTY
Boelke, O. R. Frame 1 ... abd

MILAM COUNTY
Caffey, B. F. Robinson 1 ... abd

NUECES COUNTY
McCoy, Texon Royalty Co. 1 ... abd

SAN PATRICIO COUNTY
Welder, Heep Oil Corp. 1 ... abd

STARR COUNTY
Ramon, Danvers & Harrison Oil Corp. 1 abd

WEBB COUNTY
Benavides, Magnolia Pet. Co. 1 ... abd

WILSON COUNTY
Houston, Bexar Pet. Co. 1 ... abd

Wells completed ... 28
Production ... 50
Tests abandoned ... 26
Gas production ... 6,000,000

Gulf Coast Fields

TEXAS

Summary of Field Operations

Field—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Arriola ...	1	55	0	0	0	0	0
Barbers Hill .	3	175	2	0	1	17	18
Batson ...	3	30	0	0	0	1	1
Big Creek ...	0	0	0	0	0	1	1
Boling ...	1	0	1	0	0	0	0
Buckeye ...	1	0	1	0	0	1	2
Clay Creek ..	0	0	0	0	0	3	3
Cleveland ...	1	0	1	0	0	3	3
Coletto Creek.	2	0	1	1	0	1	1
Conroe ...	19	24,500	3	2	1	23	24
Damon Md. ..	0	0	0	0	0	2	2
North Dayton	1	0	1	0	0	0	0
Esperson ...	1	200	0	0	0	3	3
Garwood ...	0	0	0	0	0	1	1
Goose Creek .	0	0	0	0	0	5	5
Greta ...	3	505	0	1	5	17	22
Hankamer ..	0	0	0	0	0	1	1
High Island	1	750	0	0	1	4	5
Hockley ...	0	0	0	0	0	1	1
Hull ...	10	3,740	3	0	2	13	15
Humble ...	1	0	1	0	0	1	1
Keeran ...	0	0	0	0	0	1	1
Liberty ...	0	0	0	0	0	1	1
Livingston ...	1	519	0	0	1	4	5
Louise ...	2	0	2	0	1	2	3
Manvel ...	1	0	1	0	2	4	6
McFaddin district ...	0	0	0	0	0	2	2
Mykawa ...	1	50	0	0	0	2	2
O'Connor ...	0	0	0	0	1	1	2
Orange ...	1	5	0	0	0	1	1
Orchard ...	0	0	0	0	0	1	1
Pierce Jct. ..	3	446	1	0	0	1	1
Pledger ...	0	0	0	0	1	2	3
Port Neches .	1	60	0	0	0	2	2
Saratoga ...	2	24	0	0	1	2	3
Sour Lake ..	1	0	1	0	0	0	0
Spindle Top .	1	200	0	0	0	0	0
Stratton Ridge ...	0	0	0	0	0	1	1
Sugar Land .	0	0	0	0	0	1	1
Thompson ...	5	2,015	1	0	1	1	2
Tomball ...	7	1,470	1	2	3	10	13
W. Columbia.	0	0	0	0	0	1	1
Miscellaneous	13	0	13	0	16	40	56
Total Feb. .	87	34,744	54	6	38	179	217
Total Jan. .	128	68,353	32	7	23	158	181
Difference.	41	33,609	2	1	15	21	36

LOUISIANA

Field—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Black Bayou.	0	0	0	0	0	1	1
Cameron Meadows ..	1	0	1	0	1	3	4
Choctaw ...	0	0	0	0	1	0	1
Darrow ...	0	0	0	0	0	1	1
Dog Lake ...	1	0	1	0	0	0	0
Edgerly ...	1	0	1	0	0	3	3
Gueydan ...	0	0	0	0	0	2	2
Hackberry ..	1	510	0	0	2	7	9
Iowa ...	2	932	1	0	0	8	8
Jennings ...	0	0	0	0	0	1	1
Lake Barre .	0	0	0	0	2	3	5
Lake Pelto ..	0	0	0	0	0	2	2
Leesville ...	6	3,686	4	0	2	2	4
Lockport ...	0	0	0	0	2	4	6
Roanoke ...	0	0	0	0	0	3	3
Port Barre ..	1	0	1	0	0	3	3
Sorrento ...	0	0	0	0	0	2	2
Starks ...	0	0	0	0	0	2	2
Sulphur ...	1	50	0	0	0	7	7
Sweet Lake .	0	0	0	0	0	1	1
Vinton ...	1	50	0	0	3	7	10
White Castle.	0	0	0	0	0	1	1
Miscellaneous	3	0	3	0	5	18	23
Total Feb. .	18	4,228	12	0	18	81	99
Total Jan. .	18	7,830	4	0	10	72	82
Difference..	0	3,602	8	0	8	9	17
Total Gulf Coast:							
February ..	105	38,972	46	6	56	260	316
January ...	146	79,183	36	7	33	230	263
Difference..	41	37,211	10	1	23	30	53

TEXAS

WELLS COMPLETED

ARRIOLA—HARDIN COUNTY
Arriola fee, Republic Prod. Co. and Houston Oil Co. 6 ... 55

BARBERS HILL—CHAMBERS COUNTY
J. Wilburn, Sun Oil Co. 19 ... abd
J. Wilburn, Sun Oil Co. 20 ... abd
Wilburn, Texas Co. 8 ... 175

Wells completed ... 3
Production ... 175
Abandoned ... 2

BATSON—HARDIN COUNTY
Honeymoon, Ada Belle Oil Co. 164 10
Honeymoon, Ada Belle Oil Co. 165 10
Texaco and W. Weiss estate, Ada Belle Oil Co. 166 ... 10

Wells completed ... 3
Production ... 30

BOLING—WHARTON COUNTY
Rogers, Asher et al 2 ... abd

BUCKEYE—MATAGORDA COUNTY
Unit 25 (Sheldon), United North & South Dev. Co. 1 ... abd

CLEVELAND—LIBERTY COUNTY
Foster Lumber Co., Brown & Wheeler 1 abd

COLETTO—VICTORIA COUNTY
Maurer, John F. Camp. 2 ... abd
Victor Urban, Houston Oil Co. 1 ... gas

Wells completed ... 2
Abandoned ... 1
Gas ... 1

CONROE—MONTGOMERY COUNTY
A. R. Allen, Alpha Pet. Co. 2 ... 2110
South Texas Dev. Co., Alpha Pet. Co. 2 410
Harris estate, American Liberty Oil Co. 1-C ... gas
South Texas Dev. Co., Feltex Oil Co. 1-B 480
Keystone Mills, Gulf Coast Drlg. & Prod. Co. 15-A ... abd
Keystone Mills, Gulf Coast Drlg. & Prod. Co. 16-A ... abd
Keystone Mills, Gulf Coast Drlg. & Prod. Co. 20-A ... gas
American National Bank, Humble Oil & Ref. Co. 4 ... 1650
Emory, Humble Oil & Ref. Co. 10 ... 1340
Keystone Mills, Humble Oil & Ref. Co. 20 ... 2110
Keystone Mills, Humble Oil & Ref. Co. 33 ... 2200
Madeley, Humble Oil & Ref. Co. 16 .. 1650
Moorehead, Humble Oil & Ref. Co. 3-A. 1890
South Texas Dev. Co., Humble Oil & Ref. Co. 61-A ... 1650
South Texas Dev. Co., Humble Oil & Ref. Co. 5-C ... abd
South Texas Dev. Co., Humble Oil & Ref. Co. 5-D ... 2350
Keystone Mills, Sun Oil Co. 10 ... 2340
American Nat. Bank, Tide Water Oil 3. 2090
South Texas Dev. Co., Tide Water Oil Co. and Republic Prod. Co. 9 ... 2230

Wells completed ... 19
Production ... 24,500
Gas ... 2
Abandoned ... 3

NORTH DAYTON—LIBERTY COUNTY
Quintette, Ferguson & Head 10 ... abd

ESPERSON—LIBERTY COUNTY
Moores Bluff, General Crude Oil Co. 11 200

GRETA—REFUGIO COUNTY
J. M. O'Brien, Atlantic Oil & Prod. Co. and Stanolind 1-G ... 210
Ira Heard, Nesral Oil Co. and Atlantic Prod. Co. 1 ... gas
Lambert, United Gas & Prod. Co. 6 295

Wells completed ... 3
Production ... 505
Gas ... 1

HIGH ISLAND—GALVESTON COUNTY
G. E. Smith, Yount Lee Oil Co. 20 .. 750

HULL—LIBERTY COUNTY
Phoenix, Gulf Prod. Co. 95 ... 175
Orgain, Houston Prod. Co. 4 ... 450
Hooks-Spell, Humble Oil & Ref. Co. 13 336
Hooks-Guedry, Humble Oil & Ref. Co. 34 ... 69
Phoenix Dev. Co., Miramar Oil Corp. 7-A 480
Dolbear, Republic Prod. Co. 77 ... abd
Dolbear, Republic Prod. Co. 150 ... abd
Barrow fee, Texas Co. 5 ... abd
Hooks fee, Yount Lee Oil Co. 5 ... 1750
Hooks fee, Yount Lee Oil Co. 8 ... 480

Wells completed ... 10
Production ... 3740
Abandoned ... 3

HUMBLE—HARRIS COUNTY
Wheeler-Pickens, Marshall & Drake 1. abd

LIVINGSTON—POLK COUNTY
Allen Hibarger, Polk County Oil Co. 2. 519

LOUISE—WHARTON COUNTY
W. Garrett, Pure Oil Co. 1 ... abd
W. H. Lancaster, Pure Oil Co. 1 ... abd

Wells completed ... 2
Abandoned ... 2

MANVEL—BRAZORIA COUNTY
Belcher, Texas Co. 6-A ... abd

MYKAWA—HARRIS COUNTY
Minnetex, Crown-Framer Oil Co. 3 50

ORANGE—ORANGE COUNTY
Winfree, Orange Pet. Co. 7 ... 5

PIERCE JUNCTION—HARRIS COUNTY
Ritter, Harrison & Abercrombie Oil Co. 4-B ... 200
Settegast, Rio Bravo Oil Co. 15-A ... abd
Settegast, Rio Bravo Oil Co. 16-A ... 246

Wells completed ... 3
Production ... 446
Abandoned ... 1

PORT NECHES—ORANGE COUNTY
Polk, Texas Co. 1-B ... 60

SARATOGA—HARDIN COUNTY
Jordit, Rio Brava Oil Co. 105 ... 15
Jordit, Rio Brava Oil Co. 105-A ... 9

Wells completed ... 2
Production ... 24

SOUR LAKE—HARDIN COUNTY
Sour Lake Bank, Arlis Pet. Co. 1 .... abd

SPINDLETOP—JEFFERSON COUNTY
Gladys, Yount Lee Oil Co. 14 ... 200

THOMPSON—FORT BEND COUNTY
George, Humble Oil & Ref. Co. and Gulf Prod. Co. 9-A ... 164
Lockwood & Sharp, Humble Oil & Ref. Co. 19-B ... 26
Lockwood & Sharp, Humble Oil & Ref. Co. 20-B ... 815
Lockwood & Sharp, Humble Oil & Ref. Co. 22-B ... 1010
Sherman McCall, Texas Co. 2 ... abd

Wells completed ... 5
Production ... 2015
Abandoned ... 1

TOMBALL—HARRIS COUNTY
Nelson, Amerada Pet. Co. and Stanolind Oil & Gas Co. 2 ... 490
J. and M. Brautigan, Humble Oil & Ref. Co. 1-A ... 144
Hempel, Humble Oil & Ref. Co. 1 .... gas
W. Hoffman, Humble Oil & Ref. Co. 1. 336
F. J. Holderrith, Humble Oil & Ref. Co. 1 ... 500
Quilter, Humble Oil & Ref. Co. 1-B .... gas
F. Frautigan, Stanolind Oil & Gas Co. 1 abd

Wells completed ... 7
Production ... 1470
Gas ... 2
Abandoned ... 1

Miscellaneous Texas

BRAZOS COUNTY
H. A. Walling, Stone Oil Co. 1 ... abd

COLORADO COUNTY
Lake Side Irrigation, Hughes-Patrick Oil Co. 1 ... abd

GRIMES COUNTY
L. Fulgham, Arthur M. White et al 1 abd
Henderson, Humble Oil & Ref. Co. 1 .. abd

HARRIS COUNTY
Dunn, Turnbull & Irwin 1 ... abd

LIBERTY COUNTY
Eicke, Thomas et al 1-A ... abd
W. E. Finley, J. Seale 1 ... abd

MATAGORDA COUNTY
Turner, H. E. Clark et al 1 ... abd
Boker, Continental Oil Co. 1 ... abd

NACOGDOCHES COUNTY
Stripling & Hazelwood, James W. Rich 1 ... abd

SAN JACINTO COUNTY
Delta Land & Timber, Weaver & Crimm and Shell Pet. Co. 1 ... abd

TYLER COUNTY
Kirby Lumber Co., Turnbull & Irwin No. 1 ... abd

WHARTON COUNTY
Schubeck, Monarch Oil Co. 1 ... abd

LOUISIANA

CAMERON MEADOWS—CAMERON PARISH
Cameron Meadows, Humble Oil & Ref. Co. 4 ... abd

DOG LAKE—TERREBONNE PARISH
State-Dog Lake, Texas Co. 9 ... abd

EDGERLY—CALCASIEU PARISH
Sulphur Mining Co., Yount Lee Oil 1 .. abd

EAST HACKBERRY—CAMERON PARISH
Barbee estate, Union Sulphur Co. 1 510

IOWA—JEFFERSON DAVIS PARISH
C. Le Bleu, Shell Pet. Corp. 1 ... abd
Johnson, Shell Pet. Corp. 1 ... 932

Wells completed ... 2
Production ... 932
Abandoned ... 1

LEESVILLE—LAFOURCHE PARISH
Community (lease No. 2), Gulf Ref. 1.. abd
Community (lease No. 3), Gulf Ref. 1.. abd
J. N. Le Fort et al, Gulf Ref. Co. 1 .. abd
State Bayou LaFourche, Hellis et al 1.. 1519
L.L.&E., Texas Co. 8 ... abd
L.E.&E., Texas Co. 10 ... 1167

Wells completed ... 6
Production ... 2686
Abandoned ... 4

PORT BARRE—ST. LANDRY PARISH
J. A. Perkins, Texas Co. 1 ... abd

SULPHUR—CALCASIEU PARISH
Fee, Union Sulphur Co. 744 ... 50

VINTON—CALCASIEU PARISH
Vincent, Vinton Pet. Co. 22 ... 50

Miscellaneous Louisiana

PLAQUEMINES PARISH
Garden Island, Texas Co. 10 ... abd

VERMILLION PARISH
Faulk, Hamill & Smith 1 ... abd

VERNON PARISH
Dalta Land & Lumber Co., Vernon Oil 1 abd

East Texas Border Counties

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Cass ...	0	0	0	0	0	1	1
Harrison ...	0	0	0	0	1	2	3
Marion ...	0	0	0	0	0	2	2
Panola ...	1	0	1	0	1	3	4
Shelby ...	0	0	0	0	0	1	1
Ttl. Feb...	1	0	1	0	2	9	11
Ttl. Jan...	2	15	1	0	2	10	12
Difference.	1	15	0	0	0	1	1

Louisiana Fields

Summary of Field Operations

	Comp.	Prod.	Dry	Gas*	Rigs	Drg.	Ttl.
Avoyelles	0	0	0	0	0	1	1
Beauregard	0	0	0	0	0	1	1
Bienville	0	0	0	0	1	2	3
Bossier	2	0	1	1	3	6	9
Caddo	4	60	2	0	1	10	11
Caldwell	0	0	0	0	0	2	2
Catahoula	0	0	0	0	1	0	1
Claiborne	2	31	1	0	1	0	1
Concordia	0	0	0	0	0	1	1
DeSoto	2	0	2	0	4	10	14
East Carroll	0	0	0	0	1	1	2
Franklin	0	0	0	0	1	0	1
Grant	0	0	0	0	0	2	2
Jackson	1	0	1	0	0	0	0
Morehouse	1	0	0	1	1	1	2
Natchitoches	1	0	1	0	1	3	4
Ouachita	1	0	0	1	4	2	6
Rapides	0	0	0	0	5	2	7
Red River	1	0	1	0	2	1	3
Richland	0	0	0	0	1	1	2
Sabine	18	1,440	4	0	28	52	80
Union	1	0	0	1	1	1	2
Vernon	0	0	0	0	1	1	2
Webster	0	0	0	0	1	1	2
Ttl. Feb.	34	1,531	13	4	58	101	159
Ttl. Jan.	26	2,935	10	4	48	115	163
Difference	8	1,404	3	0	10	14	4

*Gas production: Bossier, 16,000,000 feet; Morehouse, 7,000,000 feet; Ouachita, 1,200,000 feet; Union, 14,600,000 feet; total, 38,800,000 feet.

WELLS COMPLETED

BOSSIER PARISH

8-22-13 Luther Ford, Gulf Ref. Co. 1.. dry
13-17-12 Skannell Unit, United Gas Pub. Serv. Co. 1 ..... gas

Gas production 16,000,000

CADDO PARISH

15-21-16 G. W. Craig, C. W. Gibbons et al 1 50
5-18-16 Hammock, Louana Oil & Gas Co. 2-A ..... dry
12-14-16 Lawhon-Bogan, McEnery & Bird 1 ..... dry
32-21-15 Hicks, Shreveport Oil Corp. 10 10

CLAIBORNE PARISH

11-23-8 Anna Taylor, Haynesville Partship 1 31
8-19-5 Tony Durrett, United Gas Pub. Serv. Co. 2 ..... dry

DESOTO PARISH

35-13-12 J. L. Scales, E. R. Appleby 1. dry
8-12-14 Mary Huson, Coker Oil Corp. 1 dry

MOREHOUSE PARISH

9-21-5e Montgomery, United Carbon Co. 1 ..... gas

Gas production 7,000,000

NATCHITOCHES PARISH

10-5n-6w Clarke-Boyce Lbr. Co., George R. Stevens 1 ..... dry

OUACHITA PARISH

33-19-4e Nelson, Inabnet & Pipes 4 .... gas

Gas production 1,200,000

RED RIVER PARISH

10-14-11 A. N. Sample, H. M. Jones 1.. dry

SABINE PARISH

10-9-13 A. J. Burkett, Nick Barbare 1 15
14-7-11 Rains, J. C. Chandler 1 30
10-9-13 E. K. Harris, Cleary Bros. 1 .. 75
2-7-13 J. F. Nulton, Warren G. Gray 1 dry
20-9-13 Chambliss heirs, Helena O. & G. Co. 2 5
14-7-11 Rains, H. M. Jones 1 ..... dry
10-9-13 Paul, Lanier & Rodgers 1 100
10-9-13 Ross & Son, Miles & Strickland 1 10
29-8-11 Billbray, Monroe Prod. Co. 3 .. 300
7-7-11 Sabine Lbr. Co., Monroe Prod. Co. 1 400
32-8-11 F. Greer, George L. Pace 3 300
10-9-13 C. W. Quinn, George L. Pace 1 60
5-7-11 La. Long Leaf Lbr. Co., Pelican Nat. Gas Co. 24 ..... dry
10-9-13 W. G. Allen, Reese & Martin 1 50
10-9-13 W. G. Allen, C. R. Reid 1 15
10-9-13 E. K. Harris, J. I. Roberts 1 .. 30
7-7-11 Williams, C. T. Ruffin, trustee 2 dry
32-8-11 Williams, Ben F. Smith 1 50

UNION PARISH

8-20-4e Fee, Southern Carbon Co. 64.. gas

Gas production 14,600,000

Arkansas Fields

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Arkansas	0	0	0	0	0	1	1
Ashley	0	0	0	0	0	1	1
Columbia	0	0	0	0	0	1	1
Conway	0	0	0	0	0	1	1
Hempstead	0	0	0	0	2	1	3
Jefferson	0	0	0	0	1	2	3
Lafayette	0	0	0	0	0	2	2
Little River	0	0	0	0	0	2	2
Lonoke	0	0	0	0	0	1	1
Miller	4	735	1	0	2	8	10
Nevada	0	0	0	0	1	2	3
Ouachita	1	0	1	0	0	3	3
Poinsett	0	0	0	0	0	1	1
St. Francis	0	0	0	0	0	1	1
Union	1	50	0	0	2	6	8
Woodruff	0	0	0	0	0	1	1
Yell	0	0	0	0	0	1	1
Ttl. Feb.	6	785	2	0	9	34	43
Ttl. Jan.	6	0	6	0	8	36	44
Difference	0	785	4	0	1	2	1

WELLS COMPLETED

MILLER COUNTY

23-15-26 Smith, Arkanva Oil Corp. 1 .. 500
4-16-26 Olivet, Magnolia Pet. Co. 2 .. 35
31-15-26 J. H. Dominick, Frank W. Rowe 1 ..... dry
33-15-26 E. L. Beck, Texarkana Oil Corp. 2 300

OUACHITA COUNTY

35-15-18 Poindexter, F. G. Harrell 1 .. dry

UNION COUNTY

3-18-13 Thompson, Marine Oil Co. 2-D 50

Mississippi Fields

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Franklin	0	0	0	0	1	0	1
Greene	0	0	0	0	0	1	1
Hinds	0	0	0	0	0	3	3
Lamar	1	0	1	0	1	0	1
Madison	0	0	0	0	0	1	1
Newton	0	0	0	0	0	1	1
Rankin	1	0	1	0	2	4	6
Scott	0	0	0	0	0	1	1
Simpson	0	0	0	0	0	1	1
Walthall	0	0	0	0	1	0	1
Warren	0	0	0	0	0	1	1
Wayne	1	0	1	0	0	0	0
Wilkinson	0	0	0	0	0	1	1
Ttl. Feb.	3	0	3	0	5	14	19
Ttl. Jan.	3	0	3	0	3	14	17
Difference	0	0	0	0	2	0	2

WELLS COMPLETED

LAMAR COUNTY

18-2n-14 Scott, Lamar Oil Co. 1 ..... dry

RANKIN COUNTY

10-4-1e Thomas, Cleve Love et al 1 ... dry

WAYNE COUNTY

16-9n-7w Gavin School Land, Wayne Oil Co. 1 ..... dry

Alabama Fields

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Baldwin	0	0	0	0	0	1	1
Lamar	0	0	0	0	0	1	1
Ttl. Feb.	0	0	0	0	0	2	2
Ttl. Jan.	1	0	1	0	0	2	2
Difference	1	0	1	0	0	0	0

Rocky Mountain Area

MONTANA

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Carbon	0	0	0	0	0	4	4
Fergus	0	0	0	0	0	3	3
Glacier	4	511	0	0	6	16	22
Liberty	1	10	0	0	0	3	3
Petroleum	0	0	0	0	0	3	3
Teton	0	0	0	0	0	3	3
Toole	0	0	0	0	0	6	6
Miscellaneous	0	0	0	0	1	10	11
Total Feb.	5	521	0	0	7	48	55
Total Jan.	5	427	2	0	6	47	53
Difference	0	94	2	0	1	1	2

WELLS COMPLETED

14-37-4e Shaffer, Western Nat. Gas 1.. 10
35-35-6w Winkler, Olive Oil Co. 1 80
16-32-5w State, Texas Co. 1 258
14-34-6w Matson, Alberta Cons. Oil Co. 1 48
15-35-6w Cardwell, Santa Rita O. & G. 2 125

Wells completed 5
Production 521

UTAH

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Total Feb.	0	0	0	0	1	14	15
Total Jan.	3	0	3	0	1	14	15
Difference	3	0	3	0	0	0	0

COLORADO

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Archuleta	0	0	0	0	1	4	5
Boulder	0	0	0	0	0	4	4
Elbert	0	0	0	0	0	3	3
Jackson	0	0	0	0	0	5	5
Larimer	0	0	0	0	0	5	5
Las Animas	0	0	0	0	0	2	2
Moffat	3	4,660	0	1	1	1	2
Morgan	0	0	0	0	1	1	2
Weld	0	0	0	0	0	3	3
Miscellaneous	0	0	0	0	0	19	19
Total Feb.	3	4,660	0	1	3	47	50
Total Jan.	1	0	1	0	4	50	54
Difference	2	4,660	1	1	1	3	4

WELLS COMPLETED

23-4n-92 Parkinson, Texas Co. 5 2500
23-4n-92 Parkinson, Stanolind O. & G. 5 .2160
9-6n-91 Bogenschultz, Rocky Mt. Gas 2 gas

Wells completed 3
Production 4660
Gas production 1,000,000

NEW MEXICO

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Chaves	1	0	1	0	0	1	1
Eddy	3	0	0	3	0	10	10
Lea	0	0	0	0	0	11	11
McKinley	0	0	0	0	0	5	5
San Juan	1	10	0	0	2	16	18
San Miguel	0	0	0	0	0	4	4
Santa Fe	0	0	0	0	0	3	3
Valencia	0	0	0	0	0	3	3
Miscellaneous	0	0	0	0	1	9	10
Total Feb.	5	10	1	3	3	62	65
Total Jan.	7	5,169	2	2	5	52	57
Difference	2	5,159	1	1	2	10	8

WELLS COMPLETED

34-30-11 Martin, McCoy & Phillips 1 .. 10
5-17-28 Vandagriff, Pecos Valley Gas 8 gas
5-19-28 Wilson-State, Pecos Valley Gas Co. 1 ..... gas
5-19-28 Wilson-State, Pecos Valley Gas Co 2 ..... gas
14-8s-26 Etz, George Etz, et al 1 ..... dry

Wells completed 5
Gas 836,000
Production 10
Dry and abandoned 1

WYOMING

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Big Horn	0	0	0	0	1	6	7
Carbon	0	0	0	0	1	5	6
Converse	0	0	0	0	0	3	3
Crook	0	0	0	0	0	7	7
Fremont	0	0	0	0	1	3	4
Hot Springs	0	0	0	0	0	3	3
Natrona	0	0	0	0	3	7	10
Niobrara	0	0	0	0	0	2	2
Sweetwater	0	0	0	0	1	3	4
Sublet	0	0	0	0	0	4	4
Uinta	0	0	0	0	0	6	6
Washakie	0	0	0	0	2	2	4
Weston	0	0	0	0	3	2	5
Miscellaneous	0	0	0	0	1	8	9
Total Feb.	0	0	0	0	13	61	74
Total Jan.	4	85	2	0	10	59	69
Difference	4	85	2	0	3	2	5

(No wells completed.)

Eastern Fields

Summary of Completed Work

Field—	Comp.	Prod.	Dry	Gas
Bradford	97	181	0	0
Allegany	5	5	0	0
Middle Field	0	0	0	0
Venango-Clarion	1	2	0	1
Butler-Armstrong	2	6	0	0
Southwest Pennsylvania	4	30	2	1
Southeast Ohio	23	302	6	5
West Virginia	30	173	5	16
Total February	162	699	13	23
Total January	174	719	15	27
Difference	12	20	2	4

Summary of Work Under Way

Field—	Rigs	Drlg.	Ttl.
Bradford	21	72	93
Allegany	0	2	2
Middle Field	0	0	0
Venango-Clarion	1	4	5
Butler-Armstrong	4	3	7
Southwest Pennsylvania	5	16	21
Southeast Ohio	8	24	32
Wes. Virginia	26	61	87
Total February	65	182	247
Total January	53	190	243
Difference	12	8	4

SOUTHWEST PENNSYLVANIA

WELLS COMPLETED

GREENE COUNTY

Gribben, Richhill O. & G. Co. 1 ..... dry

WASHINGTON COUNTY

Murphy, Carnegie Nat. Gas Co. 1 ..... gas
Miles, Manufacturers L. & H. Co. 1 30
Pittsburgh Coal Co., C. Ferguson & Co. 1 ..... dry

SOUTHEAST OHIO

WELLS COMPLETED

ATHENS COUNTY

Cline, Robinson Bros. 1 ..... gas

COSHOCTON COUNTY

Van Winkle, Preston Oil Co. 2 70
Little, Murphy Pet. Co. et al 3 60

JEFFERSON COUNTY

Miller, Mount Tabor Oil Co. 3 2
Steubenville & Wheeling Traction Co., Altamount Oil Co. 2 5
Baxter, C. S. Kelley et al 5 15

HOLMES COUNTY

Collier, Preston Oil Co. 3 ..... gas

KNOX COUNTY

Beatty, Preston Oil Co. 2 90

LICKING COUNTY

Darnes, The Wehrle Co. 7 ..... dry
Babcock, J. O. Upham 2 35

MEDINA COUNTY

Essig, Oko O. & G. Co. 60 5
Essig, Oko O. & G. Co. 61 4
Miller, E. R. Edson & Son Co. 41 10
Brown, Curtis & Eaken 12 ..... dry

MONROE COUNTY

Burkhart, Homer Newhart et al 3 ..... gas
Reed, E. G. Cunningham et al 1 ..... dry
Jones, C. E. English et al 1 ..... gas

MUSKINGUM COUNTY

Waxler, Fritz O. & G. Co. 1 ..... gas

NOBLE COUNTY

Rothley, W. F. Greenlees et al 1 ..... dry

WASHINGTON COUNTY

Dills, W. S. Harris 1 5
Graham, Helen J. Burt 18 1
Morris, Goddard & Blosser 3 ..... dry
Zanesville Canal Co., Christmar O. & G. Co. 1 ..... dry

WEST VIRGINIA

WELLS COMPLETED

BOONE COUNTY

Cole & Crane, Pond Fork O. & G. Co. 16. gas

CABELL COUNTY

Humphrey, Martin & Swanson 1 ..... gas
Holswade, Black & Sansom 1 ..... gas

CALHOUN COUNTY

Simons, Poling & Mollahan 2 ..... dry
Stump, Creed Barker 1 1
L. Stump, R. Fowler et al 1 3
Barr, W. H. Bickel 1 ..... gas
Wade, Littleton O. & G. Co. 1 ..... gas
Bennett, F. F. McIntosh 1 ..... gas
Jones, Cain & Rothwell 3 ..... gas
Welch, Stracher & Richards 1 ..... gas

GILMER COUNTY

Reynolds, Hope Nat. Gas Co. 6,060 ... gas
Stump, Mountain Iron Supply Co. 1 10
Kelly, Pgh. & W. Va. Gas Co. 7,574.. gas
Amos, Chas. F. Despard et al 1 5
Ware & Webster, A. E. Ellis et al 3 ... 20

KANAWHA COUNTY

King Land Co., Columbian Carbon Co. 2 ..... gas

PLEASANTS COUNTY

Bier, M. Boughner et al 2 2

RITCHIE COUNTY

McVay, Griffin Prod. Co. 1 ..... gas
Weinrick, W. H. Bickel 1 2
Welch, Kelley & Musser 1 ..... gas
Satterfield, Elder & Louden 5 100
Lambert, South Penn Oil Co. 13 30
Johnson, Four Point Gas Co. 1 ..... gas

ROANE COUNTY

Young, Roy L. McCuity et al 1 ..... gas
Smith, Frank Finley 1 ..... dry
Ball, Henderson Oil Co. 2 ..... dry

TYLER COUNTY

Wells, J. H. Holmes et al 1 ..... dry

WETZEL COUNTY

Ycho, Wiser Oil Co. 1 ..... gas
Hale, Peter Selman 7 ..... dry

Michigan Fields

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Midland	12	9,210	1	0	19	39	58
Isabella	8	300	2	3	22	19	41
Clare	0	0	0	0	3	1	4
Oceana	1	50	0	0	5	13	18
Lake	0	0	0	0	0	2	2
Iosco	0	0	0	0	1	0	1
Gratiot	0	0	0	0	1	3	4
Cass	0	0	0	0	3	1	4
Kent	0	0	0	0	1	2	3
Emmett	0	0	0	0	1	1	2
Montmorency	0	0	0	0	3	0	3
Sanilac	0	0	0	0	3	0	3
Saginaw	2	0	2	0	4	0	4
Newyago	0	0	0	0	0	2	2
Shiawassee	0	0	0	0	1	3	4
Allegan	0	0	0	0	1	2	3
Livingston	0	0	0	0	1	2	3
Osceola	0	0	0	0	0	1	1
Alpena	0	0	0	0	1	1	2
Cheboygan	0	0	0	0	0	1	1
Oakland	0	0	0	0	0	1	1
Macomb	0	0	0	0	1	1	2
Gennessee	0	0	0	0	1	0	1
Mecosta	0	0	0	0	1	1	2
Monroe	0	0	0	0	0	1	1
St. Clair	0	0	0	0	3	0	3
Muskegon	2	25	1	0	7	6	13
Ogemaw	3	10	2	0	6	15	21
Gladwin	0	0	0	0	1	0	1
Arenac	0	0	0	0	0	2	2
Iona	0	0	0	0	0	1	1
Eaton	0	0	0	0	0	1	1
Montcalm	0	0	0	0	0	2	2
Total Feb.	28	9,595	8	3	90	124	214
Total Jan.	40	14,690	10	4	96	105	201
Difference	12	5,095	2	1	6	19	13

WELLS COMPLETED

MIDLAND COUNTY

Greendale—Woern, J. W. Leonard 1 ... dry
Porter—James Hill, Stork Oil Co. 2 ... 100
Muscott, Stewart-Gordon Oil 4 50
J. W. Campbell, Theodore Oil 4 60
W. J. Deibel, Stewart-Gordon Co. 4.. 350
Breckenridge State Bank, Bradner-Vaugh Dev. 1 150
J. B. Richmond, Stork Oil 3 300
F. W. Howard, Pure Oil A-5 1000
P. O. Mates, Pure Oil 4 600
A. C. Wyant, Pure Oil 4 200
W. W. Hoyt, Pure Oil B-1 500
J. H. Miller, Pure Oil A-3 5900

Wells completed 13
Production 9210
Dry 1

ISABELLA COUNTY

Vernon—W. F. Maricelio, Mammoth Pet. Corp. 2 150
Leo. P. Floyd, Floyd Synd. 1 ..... dry
J. C. McGuire, W. Hunter Atha 1 ... gas
Geo. S. House, Mellon-Pollock Oil 3. dry
John Stough, Mellon-Pollock Oil 5 .. 100
Denver—S. Demski, McClanhana Oil 1. 50
Bloomfield—H. C. Luder, Pure Oil 7 .. gas
Keeler-Mitchell, Isabella Dev. Co. 4.. gas

Wells completed 8
Production 300
Dry 2
Gas 3

OCEANA COUNTY

Hart—E. E. and Bessie Newell, H. C. Nelson 1 50

SAGINAW COUNTY

Jonesville—Jas. J. Spiliane. Lamon A. Russell 1 ..... dry
Fremont—John Hubbell, Alex Jeffery 1 dry

Wells completed 2
Dry 2

MUSKEGON COUNTY

Muskegon—L. P. Haight, Lima Oil Corp. 11 ..... dry
Amos Ross, J. R. Murlin 1 25

Wells completed 2
Production 25
Dry 1

OGEMAW COUNTY

West Branch—A. and L. Meir, George F. Elliott & Co. 1 ..... dry
Ed Hutchins, W. Hunter Atha 1 .... dry
Ogemaw—Heintz, McClanahan Oil 1 .. 10

Wells completed 3
Production 10
Dry 2

Illinois Fields

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Clark	0	0	0	0	0	1	1
Crawford	0	0	0	0	1	1	2
Marion	0	0	0	0	0	1	1
Boone	0	0	0	0	0	1	1
Jefferson	0	0	0	0	0	1	1
Clinton	0	0	0	0	0	1	1
Bond	0	0	0	0	0	2	2
Madison	0	0	0	0	0	1	1
Macoupin	0	0	0	0	0	1	1
Jasper	0	0	0	0	0	1	1
Total Feb.	0	0	0	0	1	11	12
Total Jan.	1	0	1	0	2	10	12
Difference	1	0	1	0	1	1	0

WELLS ABANDONED

LAWRENCE COUNTY

Lawrence Twp.—T. H. Seed, Ohio Oil 1 abd
Bridgeport Twp.—Jake Griggs, Ohio Oil 1 ..... abd

Abandoned 2

Lima Fields

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Wood	1	0	1	0	0	2	2
Hancock	2	30	1	0	0	0	0
Allen	0	0	0	0	0	1	1
Auglaize	0	0	0	0	0	2	2
Van Wert	1	80	0	0	2	1	3
Mercer	0	0	0	0	0	1	1
Sandusky	0	0	0	0	0	4	4
Ottawa	0	0	0	0	0	1	1
Seneca	0	0	0	0	0	4	4
Lucas	0	0	0	0	0	1	1
Wyandot	4	10	2	1	2	7	9
Hardin	1	0	0	1	0	0	0
Marion	1	0	1	0	0	0	0
Shelby	2	5	1	0	0	0	0
Williams	0	0	0	0	0	1	1
Total Feb.	12	125	6	2	4	25	29
Total Jan.	6	10	1	3	1	32	33
Difference	6	115	5	1	3	7	4

WELLS COMPLETED

WOOD COUNTY

Liberty—E. B. Phillips, Ohio Oil 41 ... abd
Henry—C. Weller fee, Ohio Oil 2 ..... abd
Jackson—R. & E. Wagner, Pember & Raydure 1 ..... dry
Lake—Peter Bahnsen, Chas. F. Zeising & Co. 1 ..... abd

Wells completed 1
Dry 1
Abandoned 3

HANCOCK COUNTY

Van Buren—H. & H. Bosse, Bosse Bros. 1 ..... dry
Liberty—A. C. Montgomery, Newton Oil 11 30

Wells completed 2
Production 30
Dry 1

VAN WERT COUNTY

Jackson—Arthur Reed, Hystanton Oil & Gas 1 80

SANDUSKY COUNTY

Scott—Wm. Duquette, L. P. Neiset Oil 1, 2, 3, 4 ..... abd

OTTAWA COUNTY

Harris—J. H. Magee, Zorn-Hornung Co. 1 ..... abd

LUCAS COUNTY

Oregon—W. S. Mickens, Belle DeKay 1 abd
Gertrude J. Niles, Ohio Oil 1, 2 .... abd
Jerusalem—R. H. and M. A. Eck, Ohio Oil 1, 2 ..... abd

Abandoned 3

WYANDOT COUNTY

Crane—Louis Brandt, Keiner & Co. 8.. 10
Scott Hildebrandt, U. S. Oil & Gas 2 gas
Jos. Coutard, Robt. Kirk & Co. 1 ... dry
Crawford—Edward Reister, Wyandot Oil 1 ..... dry

Wells completed 4
Production 10
Dry 2
Gas 1

HARDIN COUNTY

Cessna—Bert Kelley, Kenova Oil Co. 1 gas

MARION COUNTY

Claridon—J. B. Brockelsby, Holiday & Co. 2 ..... dry

SHELBY COUNTY

McLean—Ernst, Henry Ernst 2 5
Henry Ernst, J. J. Wedesny & Co. 1. abd
Cynthian—Jose Nicholas, Ellerman & Co. 1 ..... dry
J. Zimmerman, Wittmer Co. 3 ..... abd
Frank Miller, Wittmer Co. 1 ..... abd

Wells completed 2
Production 5
Dry 1
Abandoned 3

Central Ohio Fields

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Ashland	1	12	0	0	1	0	1
Medina	6	40	1	0	1	1	2
Lorain	2	0	1	1	0	6	6
Holmes	2	0	0	2	1	2	3
Richland	0	0	0	0	0	1	1
Wayne	0	0	0	0	1	2	3
Summitt	0	0	0	0	0	3	3
Fairfield	0	0	0	0	1	2	3
Knox	2	100	1	0	1	5	6
Coshocton	3	192	0	0	2	4	6
Licking	3	35	1	1	0	5	5
Muskingum	2	0	1	1	1	7	8
Athens	2	0	0	2	2	9	11
Tuscarawas	0	0	0	0	0	4	4
Stark	6	0	0	6	3	18	21
Belmont	3	0	3	0	0	7	7
Guernsey	3	0	1	2	3	9	12
Crawford	0	0	0	0	0	1	1
Gallia	0	0	0	0	0	3	3
Scioto	0	0	0	0	0	1	1
Pike	0	0	0	0	0	2	2
Carroll	0	0	0	0	0	3	3
Vinton	0	0	0	0	1	2	3
Lawrence	0	0	0	0	0	5	5
Total Feb.	35	379	9	15	18	102	120
Total Jan.	42	253	6	28	20	92	112
Difference	7	126	3	13	2	10	8

WELLS COMPLETED

ASHLAND COUNTY

Mohican—George W. Black, Moore & Co. 7 12

MEDINA COUNTY

Chatham—Henry Essig, O. K. Oil & Gas 59 10
Henry Essig, O. K. Oil & Gas 60 5
E. G. Miller, E. R. Edson Sons Co. 40 5
E. G. Miller, E. R. Edson Sons Co. 41 10
Thos. Brown, Jr., Curtis & Eaken 12. dry
Litchfield—Pearl & Frank Weaver, D. A. Lake 12 10

Wells completed 6
Production 40
Dry 1

LORAIN COUNTY

Eaton—Elmer Alexander, Ohio Fuel Gas Co. 1-5,780 ..... gas
Sheffield—Fee, National Tube Co. 1 ... dry

Wells completed 2
Dry 1
Gas 1

HOLMES COUNTY

Richland—H. C. Carver, H. C. Carver 1 gas
Hardy—Phil Collier, Preston Oil 3 .... gas

Wells completed 2
Gas 2

KNOX COUNTY

Monroe—James Metzker, Upham Oil 1 . dry
Jackson—Parker Marvis, Pure Oil 3 .. 100

Wells completed 2
Production 100
Dry 1

COSHOCTON COUNTY

Perry—Ward Little, Murphy Pet. Co. 3. 60
A. Van Winkle, Preston Oil 2 80
Pike—Isaac Norris, Leonard Oil Co. 4.. 52

Wells completed 3
Production 192

LICKING COUNTY

Fallsburg—C. M. Babcock, G. A. Upham 2 35
Madison—Jennie Darnes, Wehrle Gas 7 dry
Franklin—Thos. Smith, Wehrle Gas 2. gas

Wells completed 3
Production 35
Gas 1
Dry 1

MUSKINGUM COUNTY

Brush Creek—Ella Fountain, Sutton & Stansberry 2 ..... dry
Ora Waxler, Fritz Oil & Gas Co. 1 .. gas

Wells completed 2
Gas 1
Dry 1

ATHENS COUNTY

Berne—G. E. Wyatt, Carpenter & Glaizer 3 ..... gas
Lee—Alvin D. Cline, Robinson Bros. 1. gas

Wells completed 2
Gas 2

STARK COUNTY

Jackson—Eva M. Sisler, Sisler & Co. 6.. gas
Plain—Catherine Donnenwirth, Cunningham Nat. Gas 1 ..... gas
F. A. Goldsmith, East Ohio Gas 1 ... gas
Orchard Acres, Kemrow Co. 2 ..... gas
Wm. Miller, Brendel Prod. Co. 1..... gas
Peter G. Grabner, Brendel Prod. Co. 1 gas

Wells completed 6
Gas 6

BELMONT COUNTY

Warren—S. E. Douglas, Robt. Lewis & Co. 3 ..... dry
Union—G. A. Nichols, Short Bros. & Co. 1 ..... dry
Luna Doughty, Robt. Morgan & Co. 1 dry

Wells completed 3
Dry 3

GUERNSEY COUNTY

Wheeling—Jennie Rose, J. T. Roach 4.. gas
Adams—Ella B. Simms, C. C. Wharton 1 dry
Willis—Clyde V. Foraker, Wilber Keith 1 ..... gas

Wells completed 3
Gas 2
Dry 1

Indiana Fields

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Gibson	0	0	0	0	0	2	2
Sullivan	2	0	0	2	0	2	2
Pike	3	0	3	0	0	2	2
Daviess	0	0	0	0	0	2	2
Randolph	0	0	0	0	0	1	1
Warrick	0	0	0	0	0	2	2
Spencer	0	0	0	0	0	2	2
Perry	2	60	1	0	0	0	0
Greene	0	0	0	0	0	1	1
St. Joe	0	0	0	0	0	1	1
Harrison	0	0	0	0	0	1	1
Porter	0	0	0	0	0	1	1
Stark	0	0	0	0	0	1	1
Henry	0	0	0	0	0	1	1
Knox	0	0	0	0	0	1	1
Martin	0	0	0	0	0	1	1
Hendricks	1	0	1	0	0	0	0
Shelby	0	0	0	0	1	1	1
Hancock	0	0	0	0	0	1	1
Vanderburg	10	54	5	0	1	8	9
Madison	2	0	2	0	0	0	0
Total Feb.	20	114	10	4	1	31	32
Total Jan.	21	160	8	7	0	35	35
Difference	1	46	2	3	1	4	3

WELLS COMPLETED

SULLIVAN COUNTY

Curry—Flora Jewell, Dome Gas Co. 1.. gas
Lando Martz, Dome Gas Co. 1 ..... gas

Wells completed 2
Gas 2

PIKE COUNTY

Washington—Thomas Stone, H. N. Bell & Co. 2 ..... dry
Madison—R. M. and C. P. Stewart, Wiser Oil 2 ..... dry
Clay—Stewart Bros., Wiser Oil Co. 2 .. dry

Wells completed 3
Dry 3

PERRY COUNTY

Clark—John Leclire, Bankable Oil 5 .. 60
Oil—John Flamion, Bankable Oil 1 ... dry

Wells completed 2
Production 60
Dry 1

HENDRICKS COUNTY

Liberty—G. T. Underwood, Clayton Oil Co. 1 ..... dry

VANDERBURG COUNTY

Center—Geo. Hornby, Vanderburg Oil Corp. 6 6
Geo. Hornby, Vanderburg Oil Corp. 7 8
Geo. Hornby, Vanderburg Oil Corp. 8 dry
Katherine Builtman, Foreman & Miller 2 20
Oscar Euler, Perry Tichenour 1 10
Bernard Heerdink, C. C. Tallaferro, Jr., 1 ..... dry
Henry Fois, C. C. Tallaferro, Jr., 1 .. dry
John Adler, John R. Knapp & Co. 1. dry
Johnson & Pfohl, W. Myers & Co. 1.. 10
German—E. Crim, John L. Drake & Co. 1 ..... dry

Wells completed 10
Production 54
Dry 5

MADISON COUNTY

Fall Creek—W. V. Mort, Pendleton Natural Gas Co. 1 ..... gas
Anderson—John Sisson, Pendleton Natural Gas 1 ..... gas

Wells completed 2
Gas 2

Kentucky Fields

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Ohio	11	78	5	0	0	16	16
Daviess	0	0	0	0	0	16	16
Hancock	0	0	0	0	0	6	6
Muhlenberg	0	0	0	0	0	3	3
McLean	1	15	0	0	0	6	6
Grayson	0	0	0	0	1	1	2
Bath	0	0	0	0	0	1	1
Lee	0	0	0	0	0	1	1
Knox	0	0	0	0	0	1	1
Edmonson	0	0	0	0	0	1	1
Todd	0	0	0	0	0	1	1
Warren	0	0	0	0	0	0	0
Allen	0	0	0	0	1	0	1
Total Feb.	12	93	5	0	2	53	55
Total Jan.	3	2	2	0	2	58	60
Difference	9	91	3	0	0	5	5

WELLS COMPLETED

OHIO COUNTY

Louisville—Stock Bank, Rough River Corp. 2 ..... dry
Kirk heirs, Cumberland Pet. Co. 1 ... dry
E. C. Dunn, Stewart & Weir 7 25
Lida Carter, A. F. Bellamy & Co. 2 ... 8
Floyd Keown, Gordon Oil Co. 1 10
Norris heirs, Fred L. Weir & Co. 15 ... 5
Ida Kelley, Earnest Porter 1 ..... dry
Ella Hines, J. H. Haynes 2 5
J. H. Jeffers, Vickers & Co. 1 ..... dry
John Ascrige, Snowden & McSweeney 1 dry
E. C. Dunn, Stewart H. Weir 8 25

Wells completed 12
Production 78
Dry 5

McLEAN COUNTY

Calhoun—L. E. Morris, W. W. Dameron 6 15

Allegany Refineries, Inc., Making Variety Products

(Continued From Page 53)

efforts for the purpose of securing a suitable market outlet for this crude. The first move was to acquire the gathering system which consisted of 75 miles of pipe line which formerly served the affected area. This deal was consummated after an extensive search had been made amongst the major purchasing companies for a suitable market outlet. After it was found that no substantial market could be developed, only at a decreased market price, it was resolved by this group that the only outlet would be developed through a refinery which would enable us to market the by-products of the crude in question.

We found that we did not have a "black crude," as this crude had been referred to, but that we had a heavy dark 100 per cent Penn Grade crude oil. This was proven to us by a series of varied distillation tests, which proved to us that we not only had a Penn Grade crude as above mentioned, but that we had a more valuable grade of crude oil because of the increased yield of lubricants so desirable in 100 per cent Penn Grade crude oil.

During an intensive and exhaustive study for a period of over nine months this group consulted seven manufacturers of refinery equipment. After a complete thorough set of plans and specifications had been submitted, a contract was let in May, 1932, to the Leader Industries, Inc., of Decatur, Ill., the work to be done under the supervision of its capable technical director, Dr. E. H. Leslie, for the construction of what we believed to be the latest and most modern refinery in the Penn Grade area. Since that time construction of the different units has been in progress.

To date this company has expended over $350,000 in cash to protect this 100 per cent Penn Grade crude oil and believe that by so doing we have protected to a certain measure the worthy and titled position which this type of crude merits in the industrial markets of the world.

At the present time we are manufacturing the products shown in the accompanying table.

It is our intention in the near future to construct additional units which will complete this plant and enable us to manufacture and market finished 100 per cent Penn Grade motor oils, etc.

TABLE SHOWING PRODUCTS MADE BY ALLEGANY REFINERIES, INC., UNDER VARIOUS METHODS OF OPERATION

Product—	Per cent	A.P.I.	G.P.H.
Light gasoline, 300° E.P.	20.0	67.5	350
Naphtha	9.5	51.3	166
Kerosene	14.0	45.3	245
Gas oil	15.2	39.2	266
Wax distillate, 80/85 vis.	18.4	33.0	322
"600" S.R. stock, 160 vis.	22.9	25.5	400
Crude	100.0	40.4	1,750
Steam	...	...	...
Operation With Elimination of Naphtha			
Gasoline, 345° E.P.	25.0	61.0	438
Kerosene, 45°-47°	23.0	46.3	402
Fuel oil, 38°-39°	10.7	38.2	187
Operation to Make Domestic Fuel			
Kerosene, 47°	4.2	47.2	73
Domestic fuel	23.0	41.0	402
Fuel oil	2.0	36.3	35
Operation to Make 630 Flash Stock			
Fuel oil	14.9	39.5	261
Wax distillate, 95 vis.	22.0	32.8	385
Heavy wax distillate, 70 vis. at 210°	4.6	28.7	81
630 flash stock	15.0	32.3	263
Steam	...	...	...
Operation to Make Long Residuum			
Fuel oil	20.0	38.4	350
Wax distillate, 70 vis. at 100°	4.0	34.4	70
Long residuum, 90 vis. at 210°	32.5	28.7	569
Steam	...	...	...

Fuel and Lubricating Oil for Air Cooled Engines

(Continued From Page 53)

starter to crank the engine at sufficient speed, but also results in a friction low enough so that the engine can keep on running once it does start.

Just one more thought on winter starting, we often hear the remark "My new car doesn't start like a four-cylinder car I had 10 years ago. Apparently gasoline is not as good and the engines are not what they used to be when it comes to starting." The modern engine with its high output demands large intake manifolds and camshaft design quite different than that used in the old days. In order to obtain more power, the intake valve closes later and exhaust valve opens earlier. This means that for a cranking speed of 15 r.p.m. or 20 r.p.m. our modern engines probably do not start so readily. However, simply by using a light oil and getting the speed up 16 to 35 r.p.m. or above, satisfactory starting is obtained without sacrificing the wonderful performance we are in the habit of enjoying.

In conclusion I must admit that my remarks have wandered considerably from the title "Fuels and Lubrication for Air-Cooled Passenger Car and Commercial Engines." However, I have wandered purposely trying to sell the reader the idea that if he owns or uses an air-cooled engine, any of the commercial fuels or lubricating oils will give good results. Use good fuel and good oil, but do not get it too "thick."

Stanolind's Test in Reno County, Kansas, May Have Opened Another Producing Territory

By JAMES McINTYRE

Prospects of another new producing territory in Kansas were indicated in the extreme southeast part of Reno County, when a wildcat test filled 2,000 feet with oil in four hours. The well is the Stanolind Oil & Gas Co. and others' No. 1 Hilger, SE cor. NW Section 16-26-4w. The oil was found in the Viola lime at 4,062-67 feet. The Derby Oil Co. has nominated to purchase the oil from the new producer. The Stanolind Oil & Gas Co. is erecting tankage.

The wildcat test southwest of Wichita, in Sedgwick County, flowed 1,179 bbls. in 17 hours and then went dead, believed to be on account of a bridge as there is about 250 feet of open hole below the casing to the top of the pay. The well is D. R. Lauck and Shoreline Petroleum Co.'s No. 1 Jordan, NW cor. SW SE Section 6-28-1w. The first six hours the well flowed at the rate of 120 bbls. an hour and the last hour it dropped off to 5 bbls. The operators plan to set 5-inch casing on top of the pay before making another production test of the well.

Under a receivership sale the Producers & Refiners Corp.'s Martens lease in the Hollow Field in Harvey County was sold to the Sinclair Prairie Oil Co. for a consideration of $415,000. The 78-acre lease has nine producing wells with a potential of 5,211 bbls. daily. The 40,000 acres of leases in Kansas owned by the company are also being sold.

An interesting wildcat well in Stafford County was showing oil but as this is being written no production test has been made. The well is Vickers Petroleum Co. and Phillips Petroleum Co.'s No. 1 Cravens, SW cor. NE Section 15-25-11w, in the southeastern part of the county, near the townsite of Neola. Oil rose 3,000 feet in the hole in two hours and it made a flow before being shut in. The oil showing was found in the Siliceous lime at 3,920-21 feet.

The Kansas Corporation Commission has issued an order fixing the State's daily allowable production for the month of April at 122,100 bbls. and until further notice the allowable production from the various pools shall be calculated, adjusted and allocated according to tables. This table permits wells making from 1,200 to 1,400 bbls. daily an allowable of 15.29 per cent of their potential and it increases the percentage allowable as the wells get smaller in size. Wells making from 5 bbls. a day or less are permitted to produce 100 per cent of their capacity.

Kansas Production by Pools

Estimated daily production of important pools in Kansas for the week ending March 31 and for the preceding week was as follows:

Pool—	Mar. 31	Mar. 24
Hollow	11,070	12,130
Ritz-Canton	13,435	14,505
Voshell	7,520	7,810
Sedgwick County	7,065	6,135
Nikkell	5,430	5,105
Ellsworth County	4,413	3,016
Barton County	1,025	910
Rice County	11,377	9,237
Reno County	3,194	3,190
Ellis County	274	440
Kingman County	1,679	1,200
Stafford County	177	600
Russell County	7,385	6,675
Greenwood County	12,250	12,250
Butler County	17,000	17,000
Other Pools	22,176	24,317
Total	125,475	124,520

Harvey County

Sinclair Prairie Oil Co.'s No. 2 Schroeder-"B", SW cor. NW NE Section 4-22-3w, Harvey County, was completed with a potential of 1,123 bbls. a day from the Hunton lime at 3,510-17 feet.

Hollow and others' No. 1 Schmidt, SW cor. SE NW Section 17-22-3w, flowed 2,115 bbls. in 24 hours and was completed. It was treated with acid in the Hunton lime at 3,464-73 feet. Same companies' No. 3 Schmidt, SW cor. NE NW Section 17-22-3w, (old well drilled deeper) was completed on the pump for 528 bbls. a day from 3,448-52 feet. Same companies' No. 5 Schmidt, NE cor. SE NW Section 17-22-3w, is a rig.

J. H. Mabee and others' No. 6 Martens, 825 feet south and 990 feet west of the NE SE Section 19-22-3w, pumped 1,588 bbls. a day from the Hunton lime at 3,432-66 feet.

Producers & Refiners Corp.'s No. 1 Martens, C NE NW SE Section 19-22-3w, pumped 247 bbls. of oil in 24 hours from the Hunton lime at 3,435-64 feet.

Sinclair Prairie Oil Co.'s No. 5 Ediger, SW cor. SE SW Section 19-22-3w, was completed with a potential of 366 bbls. a day from the Wilcox sand at 3,495-3,525 feet. Same company's No. 6 Ediger, NW cor. SE SW Section 19-22-3w, is a rig on the ground.

Mid-Kansas Oil & Gas Co.'s No. 3 Klassen, NW cor. NE NW Section 30-22-3w, was completed with a potential of 702 bbls. a day from the Hunton lime at 3,325-55 feet. The total depth of the well was 3,763 feet.

New operations in the county include, Derby Oil Co. and others' No. 1 Hiebert, NE cor. SW SE Section 4-22-3w, a rig; Texas Co.'s No. 4 Andrees, SW cor. NW SW Section 8-22-3w, spudding; Sinclair Prairie Oil Co.'s No. 4 Neufeldt, SW cor. SE SE Section 18-22-3w, a rig, and Norshead and others' No. 1 Township, 390 feet south and 30 feet east of the NW cor. Section 20-22-3w, a rig on the ground.

McPherson County

Sinclair Prairie Oil Co.'s No. 8 McCurdy, SW cor. NE SE Section 33-20-3w, McPherson County, pumped 511 bbls. of oil and was completed from the Wilcox sand at 3,278-3,309 feet.

General Petroleum Co.'s No. 1 Middleswartz, NE cor. Section 9-19-2w (old well drilled deeper), pumped 275 bbls. of oil in 24 hours from the Kansas City lime at 2,360-98 feet.

Helmerich & Payne's No. 2 Russell, C SW cor. SE NE Section 23-19-2w, pumped 155 bbls. in 24 hours and was completed. It was treated with acid in the Viola lime at 3,379-85 feet.

Helmerich & Payne and Gypsy Oil Co.'s No. 3 Lovett, SW cor. NW Section 24-19-2w, was abandoned at a total depth of 3,015 feet.

Phillips Petroleum Co. and Shell Petroleum Corp.'s No. 4 Garrett, NE cor. NW NE Section 30-19-1w, pumped 267 bbls. of oil and was completed. It was given an acid treatment at 3,423-34 feet.

Wakefield & Hawkins' No. 1 Smith, SW cor. SE Section 17-17-1w, was abandoned at a total depth of 3,327 feet.

Al Cooper and others' No. 1 Stucky, NE cor. SW Section 4-21-3w, was abandoned at a total depth of 2,420 feet on account of a fishing job.

Progressive Development Co.'s No. 1-A Stucky, NE cor. SW Section 16-21-3w, is a rig on the ground.

J. H. Mabee and Shell Petroleum Corp.'s No. 6 Friesen, SE cor. SW SE Section 33-21-3w, is a rig.

Continental Oil Co. and others' No. 1 Graber, NE cor. NW Section 32-21-1w, is a rig.

Vernon Oil & Gas Co.'s No. 1 Bengston, SE cor. NW NE Section 13-19-3w, is a cellar.

McBride, Inc.'s No. 5 Griffith, SW cor. SE SW Section 14-19-2w, was rigging up.

Kanokla Oil Co.'s No. 3 Griffin, SE cor. SW SW Section 14-19-2w, was spudding.

Helmerich & Payne and others' No. 1 Russell (5-A), CNL S half NE Section 23-19-2w, was spudding.

Reserve Oil Co. and Shell Petroleum Corp.'s No. 1 Ritz, NE cor. SW Section 31-19-1w (old well drilled deeper), old total depth 3,404 feet, was drilling at 3,461 feet.

Reno County

Sinclair Prairie Oil Co.'s No. 1 Base, C SW SE Section 26-23-4w, Reno County (old well drilled deeper), old total depth 3,320 feet. It is flowing 903 bbls. daily from the Hunton lime at 3,585-91 feet, and was completed. Same company was rigging up at No. 4 Base, C NE SE Section 26-23-4w.

Olsen Drilling Co. and Shell Petroleum Corp.'s No. 2 Roberts, C SW NW Section 25-23-4w, was completed after flowing 145 bbls. of oil in 24 hours from the pay at 3,354-76 feet. Same companies' No. 4 Roberts, C SW SW Section 25-23-4w, found the pay at 3,36167 feet and it made 60 bbls. of oil in 20 minutes.

Lario Oil & Gas Co. and others' No. 1 Russell, NE cor. SW Section 29-23-7w, a wildcat test, found water in the Wilcox sand and was abandoned at a total depth of 4,039 feet.

Ellis County

Ashby and others' No. 1 Polycyn, NE cor. SE Section 12-13-16w, Ellis County, is an old test that was plugged back from a total depth of 3,440 feet to 3,101-30 feet. It was treated with acid and completed for 100 bbls. of oil a day on the pump.

Davis and others' No. 2 Weiland, "B" NW NE NE Section 1-13-16w, is rigging up.

Blair and Hartman and others' No. 1

(Continued on Page 89)

Wildcat Operations in Kansas

Week Ending March 31

(Descriptions are East unless marked otherwise)

Company, farm and location—	Remarks:
BARTON COUNTY	
Skelton et al's No. 1 Ott, C SE SE Sec. 16-19-14w	P.B. to 3,255 ft.; acidized; pumping wtr.
Walter Shearen et al's No. 1 Kempler, SE NE NE Sec. 31-18-11w	Material.
BUTLER COUNTY	
DeGenther et al's No. 1 Marnane, NW cor. Sec. 29-26-3	Cellar.
Yarnell et al's No. 1-A Speer, SE NE NE Sec. 31-33-6e	Abnd. 2,210 ft.; wtr.
Tom Palmer and Darby Pet. Co.'s No. 1 Harder, NW NE Sec. 27-24-3	Drlg. 990 ft.
Van Meter et al's No. 1 Moore, NE cor. Sec. 5-25-4	Rig.
DICKINSON COUNTY	
Dutch Oil Co.'s No. 1 Phillips, C NE NW Sec. 15-15-1e	Drlg. 120 ft.
ELLIS COUNTY	
Alma Pet. Co. et al's No. 1 Rhodes estate, SW SW Sec. 14-11-23w	Rig on ground.
Ashby et al's No. 1 Polycyn, NE SE Sec. 12-13-16w (O.W.D.D.)	T.D. 3,125 ft.; pumped 100 bbls. oil; 35 bbls. wtr.; comp.
ELK COUNTY	
Lerke et al's No. 1 Mason, C NE NE Sec. 5-31-10	Drlg. 835 ft.
ELLSWORTH COUNTY	
Smith & Ash et al's No. 1 Wilkins, SE cor. Sec. 13-17-10w	Drlg. 1,785 ft.
FINNEY COUNTY	
National Ref. Co. et al's No. 1 Smith, C SE SW Sec. 2-23-29w	T.D. 3,323 ft.; U.R. csg.
GREENWOOD COUNTY	
Ackman et al's No. 1-A Gilroy, SE SW NW Sec. 24-25-12.	Spudded.
Oko O. & G. Co.'s No. 1 Austin, C SE Sec. 11-22-10	Drlg. 675 ft.
McPHERSON COUNTY	
Tom Palmer's No. 1 Nordling, SE SW Sec. 19-18-2w	Rig.
Slick, Pryor & Lockhart's No. 1 Ordineal, SE SW SE Sec. 21-20-3w	Spudding.
Continental Oil Co. et al's No. 1 Graber, NE NW Sec. 32-21-1w	Rig.
Phillips Pet. Co.'s No. 1 Tinsley, C SW SE Sec. 5-3-1w	Drlg. 3,446 ft.; wtr.; abnd.
Jim Madison's No. 1 Boeaker, SE NW Sec. 29-20-1w	Spudded.
Harris & Haun's No. 1 Rupp, SW cor. Sec. 13-21-2w	Drlg. in sand 3,460-85 ft.
Wakefield & Hawkins' No. 1 Smith, SW SE Sec. 17-17-1w	Abnd. 3,327 ft.; wtr.
PHILLIPS COUNTY	
Ashby et al's No. 1 Close, C SE Sec. 24-5-18w	Drlg. 2,715 ft.
RENO COUNTY	
Stanolind and Amerada's No. 1 Hilger, SE NW Sec. 16-26-4w	R.U.S.T. 4,065 ft.
RICE COUNTY	
Deitrick et al's No. 1 Fitzpatrick, C NE NE Sec. 30-21-8w	Spudding.
Foraker & Hutchins' No. 1 Smyser, SE NW Sec. 28-20-8w	Cellar.
Lario O. & G. Co. and Elwell's No. 1 Russell, NE SW Sec. 29-23-7w	Wilcox 4,035-39 ft.; wtr.; abnd.
Geo. Dickey et al's No. 1 Hunter, NE cor. Sec. 35-19-7w	Drlg. 2,725 ft.
Langston et al's No. 1 Markle, NE SW Sec. 1-20-9w	T.D. 1,057 ft.; C.O.
Reserve Dev. Co.'s No. 1 Heinz, NE SW SE Sec. 8-18-10w	Material.
ROOKS COUNTY	
Ashby et al's No. 1 Stockton, C SW SW Sec. 15-8-19w	Rig.
Phillips Pet. Co.'s No. 1 Dopitz, C SW SW Sec. 31-8-17w	Drlg. 2,390 ft.
RUSSELL COUNTY	
Western Exploration Co.'s No. 1 Andrea, SW cor. Sec. 30-15-12w	Drlg. 2,423 ft.
SEDGWICK COUNTY	
D. Lauck and Shoreline Oil Co.'s No. 1 Jordan, NW SW SE Sec. 6-28-1w	Wilcox 3,652-53 ft.; hole full of oil; preparing to test.
STAFFORD COUNTY	
Vickers Pet. Co. and Phillips Pet. Co.'s No. 1 Cravens, SW NE Sec. 15-25-11w	Viola 3,920-21 ft.; showing oil.
SUMNER COUNTY	
Wentz and Continental Oil Co.'s No. 1 Kerns, SE cor. NE Sec. 6-34-2w	Drlg. 4,225 ft.; showing wtr.
TREGO COUNTY	
Central Commercial's No. 2 King, C SE SW NE	Drlg. out cave; T.D. 4,015 ft.
WOODSON COUNTY	
Lewis Bros.' No. 1 Riggs, SW cor. Sec. 10-26-14	Set pipe at 765 ft.; S.D.

Deep Test at Binger in Caddo County Continues Center of Interest in Oklahoma Operations

By JAMES McINTYRE

The deep wildcat test at Binger, in Caddo County, still holds the interest of the oil industry in Oklahoma. The latest report from the well, Denver Producing & Refining Co.'s No. 1 A-dah-noe, C NW SW SW Section 34-10-10w, is that the bailer was being run to the bottom of the casing on Saturday indicating that the bridge has given way. The completion of this wildcat has been under way for the past 10 days and because of its depth, 9,982 feet, it has attracted national interest.

Last Friday the crew penetrated the bridge at 8,275 feet, which had delayed testing for several days. While bailing it was possible to reach a depth of 9,900 feet with the bailer, but the hole is still filled with fluid.

The well has been slopping over, heaving water and mud out of the hole and spraying over the top of the derrick after being shut in for several hours and building up pressure. It is the general belief that the bridge has been broken through as small pieces of cement, rubber and wood were blown out of the hole.

The crew were cleaning out all Saturday night, running the bailer and a special tool to the bottom of the hole and removing the mud and debris. It was opened about noon Sunday and considerable gas was coming through the casinghead and it was believed the hole was filling with fluid.

Oklahoma Production

Estimated daily average production in the week ending March 31 and the preceding week was as follows:

Pool—	Mar. 31	Mar. 24
Allen	9,020	8,910
Bristow-Slick	10,400	10,500
Cushing-Shamrock	13,500	13,500
Chandler district	6,500	6,500
Healdton	9,200	9,200
Hewitt	5,150	5,150
Burbank	14,500	17,750
Balance of Osage	23,000	23,000
Lucien	6,385	5,800
Logan County	3,010	3,105
Bowlegs	9,560	11,430
Carr City	5,305	6,570
Earlsboro	9,050	9,960
East Earlsboro	10,250	13,315
South Earlsboro	1,425	1,190
Little River	13,260	16,170
East Little River	720	730
Seminole	11,145	12,080
East Seminole	930	985
Searight	2,175	2,660
Maud	1,355	1,330
Mission	3,580	4,620
St. Louis-Pearson	20,305	23,095
Cromwell	4,700	4,700
Oklahoma City	146,940	166,475
Tatums	7,455	7,955
Sholem-Alechem	4,450	4,450
Duncan	4,450	4,450
Tonkawa-Garber-Thomas	6,750	6,750
Fish	2,820	2,750
Konawa	2,390	2,540
Gray	2,970	2,875
Graham	3,600	3,600
Holdenville	3,785	3,850
Wewoka	4,750	4,750
Yale-Jennings	5,000	5,000
Other fields	71,690	71,970
Total	461,475	499,705

The wildcat test in the Paoli area of Garvin County is expected to be drilled in the first part of the week. The well is Anderson-Kerr and others' No. 1 Rodke, NW cor. NE NW Section 21-4-1w, in the northern part of the county. Bailing to test started Sunday morning and the bailer which was lost in the hole was fished out. The casing in this test was landed at 4,872 feet, with the total depth of the hole 4,943 feet where a good showing of oil was found.

Phillips Petroleum Co.'s No. 1 Dennis, SE cor. NE Section 9-4-1, another wildcat in Garvin County, found water in the Wilcox sand at 4,698-4,706 feet, has been plugged back to 4,190 feet and was rigging up cable tools to make a production test.

The State's allowable production for the month of April was increased 20,000 bbls. daily on April 1 at 7 a. m. to a total of 476,400 bbls.

Osage County

The north offset to the discovery well in the south extension pool of the Burbank Field in Osage County was completed during the week. It was the Mid-Co Oil Co.'s No. 1, SE cor. NW Section 10-25-6. The well flowed 1,200 bbls. the first 24 hours from 2,810-62 feet. It was pinched in to 200 bbls. a day.

Kasishke's No. 2 in the NE cor. SW Section 15-25-6, flowed 570 bbls. of oil from the sand at 2,753-93 feet.

Carter Oil Co. and Norbla Oil Co.'s No. 1, in the NW cor. SE Section 10-25-6, was completed for 1,613 bbls. a day from sand at 2,790-2,852 feet.

In the Naval Reserve area, Lewis and Continental Oil Co.'s No. 2, 806 feet south and 300 feet west of the C Section 16-24-7, was completed for 675 bbls. in 14 hours from sand at 2,591-2,670 feet. Same companies' No. 3, located 1,312 feet south and 300 feet west of the C Section 16-24-7, made 525 bbls. a day after a shot in sand at 2,592-2,666 feet.

Peters Petroleum Corp.'s No. 1, SW cor. SE Section 23-23-9, found water in the Siliceous lime at 2,562-63 feet and was abandoned.

Osage Syndicate's No. 1-B C E half W half NW Section 7-21-9, was completed for 10 bbls. a day from sand at 531-41 feet.

Continental Oil Co. was moving in material for its No. 1, NW cor. SW Section 33-26-6.

Indian Territory Illuminating Oil Co. has cellar dug for No. 1, SW cor. Section 5-25-6.

Carter Oil Co. and others were building a rig at No. 4, NW cor. NE SE Section 10-25-6. Same companies were drilling at 380 feet at their No. 5, SE cor. SW NE Section 10-25-6, and No. 6, SW cor. SE NE Section 10-25-6, was building a rig.

Champlin Refining Co.'s No. 3, NW cor. SW NE and No. 4, SW cor. NW NE Section 15-25-6, were building rigs.

Phillips Petroleum Co.'s No. 3, SE cor. NE NW and No. 4, NE cor. SE NW Section 15-25-6, were both building.

E. G. Todd and others' No. 7, NE cor. SW SW Section 3-23-8, was a new location.

Ray Branstetter's No. 1, SE cor. NE Section 28-22-11, was spudding.

Creek County

In the Olive Pool, Creek County, Gled Oil Co.'s No. 7 Escoe, NW cor. SE SE Section 27-18-8, flowed 70 bbls. of oil after a shot. The oil was found in Layton sand at 1,304-25 feet.

R. K. Marrs' No. 1 J. Tiger, NE NW SE Section 26-18-8, found the Layton sand dry and it was abandoned at 1,320 feet.

Bay State Oil Co.'s No. 4 Crabtree, SE cor. SW Section 34-18-8, was completed for 20 bbls. a day after a shot in the Layton sand at 1,305-44 feet. Same company's No. 5 Crabtree, NW cor. SW SW Section 34-18-8, is a location.

J. E. Crosbie's No. 2 Casey, NW cor. NE SE Section 3-17-8, swabbed and flowed 75 bbls. of oil a day after a shot in the Layton sand at 1,345-75 feet.

L. B. Jackson's No. 2 Brown, SE cor. NW SE Section 27-18-8, was spudding.

Todd & Williby's No. 1 Brown, SW cor. NW Section 34-18-8, was spudding.

In the other areas of Creek County, Bingman Brothers' No. 3 Thompson, CEL NE NW Section 36-17-11, was swabbing 8 bbls. a day after a shot in the Dutcher sand at 2,213-26 feet.

Comoil Oil Co.'s No. 5 Brewer (twin), NW cor. SW NE Section 8-18-11, was a rig.

Holmes & Burton's No. 2 Flint, NE cor. NW NE Section 6-18-11, was drilling at 250 feet.

C. Ogden and others' No. 2 Butler, SE cor. NE Section 16-17-11, was spudding.

Carter Oil Co.'s No. 8 Durant, SW cor. SE NE NE Section 18-16-9, is an old well rigging up to drill deeper. Old total depth was 3,023 feet.

Lincoln County

Amerada Petroleum Corp. and Stanolind Oil & Gas Co.'s No. 4 Brill, NW cor. NE NE Section 11-14-3, in the West Chandler Pool, Lincoln County, flowed 2,042 bbls. of oil in 21 hours from the Wilcox sand at 5,025-28 feet.

Twin State Oil Co.'s No. 2 Cook, NW cor. SW SW Section 1-14-3, flowed 1,512 bbls. of oil a day when completed from the Wilcox sand at 5,065-68 feet.

Indian Territory Illuminating Oil Co.'s No. 1 Stanley, C SE NE NW Section 33-14-3, a wildcat test found water in the Wilcox sand and was abandoned at a total depth of 5,313 feet.

Magnolia Petroleum Co.'s No. 2 Green, C SE NE NE Section 18-14-4, was completed for 332 bbls. a day from the Wilcox sand at 5,010-22 feet. Same company's No. 3 Wagner found the top of the Viola lime at 4,908 feet and was rigging up standard tools at a total depth of 4,045 feet.

Sinclair Prairie Oil Co.'s No. 2 Mayer, NW cor. NE NW Section 17-14-4, flowed 600 bbls. of oil and 210 bbls. of water in 15 hours from the Wilcox sand at 4,975-84 feet.

Sinclair Prairie Oil Co. and others' No. 1 Boland, in the new Meeker Pool, Lincoln County, pumped 440 bbls. of oil and will be completed. The oil was found in sand at 5,455-61 feet.

Magnolia Petroleum Co.'s No. 5 Wagner, SE cor. SW SE Section Section 2-14-3, is a rig moving in.

H. W. Pierce's No. 1 McMurtry, NE cor. Section 6-14-5, is wildcat location with the material moving in.

Greater Seminole Field

In the Keokuk Falls area, in Seminole County, Carter Oil Co. and others' No. 1 Jarvis C-32, C E half NE SW Section 18-10-6, was drilling in the Wilcox sand at 4,588-96 feet. It was showing oil.

In the Seminole district, Banta and others' No. 1 Harjo, NW cor. NE Section 36-9-6, was abandoned at a total depth of 2,690 feet.

Waltermeir Drilling Co.'s No. 1 Littleton, SW cor. NW Section 20-9-5, was a rig.

Sinclair Prairie Oil Co.'s No. 2 Maxey, NW cor. SE NW Section 1-8-6, swabbed 327 bbls. a day after a shot in the Wilcox sand at 4,160-81 feet.

John Burns' No. 1 Shephard, SE cor. NE (old well drilling deeper), was abandoned at a total depth of 1,658 feet.

Stewart & Clark's No. 1 Harrold, SW cor. SE SE Section 21-7-4, Pottawatomie County, was completed for 15 bbls. a day on the pump after swabbing and flowing 200 bbls. several months ago. The oil was found in Dolomite at 4,169-70 feet.

Turman Oil Co.'s No. 3 Ward, NW cor. SE NW Section 33-7-4, was completed for 337 bbls. a day after an acid treatment at 4,184-4,206 feet.

In the West Holdenville area of Hughes County, Magnolia Petroleum

Wildcat Operations in Oklahoma

Week Ending March 31

Northern Oklahoma

ATOKA COUNTY

Company, farm and location—	Remarks:
Malernee et al's No. 1 Greenville, N. B., NW SW Sec. 35-2s-13e	S.D. 550 ft.

ALFALFA COUNTY

Acre et al's No. 1 Acre, C SW NE Sec. 14-24-11w	T.D. 6,460 ft.; making a small flow of oil once a week.

BECKHAM COUNTY

West Oak Gas Co. et al's No. 1 Powell, NW SW Sec. 11-9-25w	T.D. 3,345 ft.; will run 8-in. csg. and test.

CADDO COUNTY

Denver Prod. & Ref. Co.'s No. 1 Noe, NW SW SW Sec. 34-10-10w	Set csg. 9,922 ft.; bailed and flowed some gas, oil and wtr.

COAL COUNTY

Moore & Deaner's No. 1 Edward, NW NE SE Sec. 27-2-8	Drlg. 1,630 ft.
Weatheimer & Daube's No. 1 Lowman, C NE SE Sec. 18-2-8	Drlg. 2,320 ft.

CREEK COUNTY

McBride et al's No. 1-A Wickham, NE NW SE Sec. 8-15-7	Fishing drill pipe 3,795 ft.

DEWEY COUNTY

Continental Oil Co.'s No. 1 Beaumer, SW NE Sec. 8-19-20w	T.D. 4,032 ft.; drlg. plugs.

GARFIELD COUNTY

Indian Terr. Illum. Oil Co.'s No. 1 Clark, C NW NW Sec. 34-21-6w	Fishing 6,520 ft.
Argo O. & G. Co.'s No. 1 Dickman, SW cor. SE Sec. 13-24-1w	Drlg. 1,400 ft.
Ross Cummings et al's No. 1 Gage, SE NW Sec. 27-22-3w	Rigging up.

GARVIN COUNTY

Anderson & Kerr's No. 1 Rodke, NW NE NW Sec. 21-4-1w	T.D. 4,955 ft.; standardizing.
Carter Oil Co. et al's No. 1 Hanner, SW NE NW Sec. 24-5-1w	Rig.
Denver P. & R.'s No. 1 Newburn, C SE SW Sec. 22-5-1e	Location.
Phillips Pet. Co.'s No. 1 Dennis, SE NE Sec. 9-4-1e	T.D. 4,670 ft.; P.B. to 4,190 ft.

HUGHES COUNTY

Dickison et al's No. 1 Webster, NW NE Sec. 22-10-10	Rig on ground.
J. B. Hill's No. 1-A Perkins, C W½ SW SW Sec. 7-5-9	S.D. 900 ft.
Birk-Kan's No. 1 Gardner, NE NW Sec. 22-6-9	Moving in tools.
Olympic Oil Co.'s No. 1 McClassen, SE NW NW Sec. 13-9-8	T.D. 600 ft.; lost tools; S.D.
Scruggs et al's No. 1 Black, NE Sec. 13-9-10	T.D. 3,125 ft.; U.R. 8-in. csg.

KAY COUNTY

Argo O. & G. Co.'s No. 1 Freese, SW NE NW Sec. 30-25-1w	Location.

(Continued on Next Page)

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A "Flex-Set" Preformed Yellow Strand Rotary Drilling Line is a super-rope to start with. Freed of Internal Stress by preforming, it—

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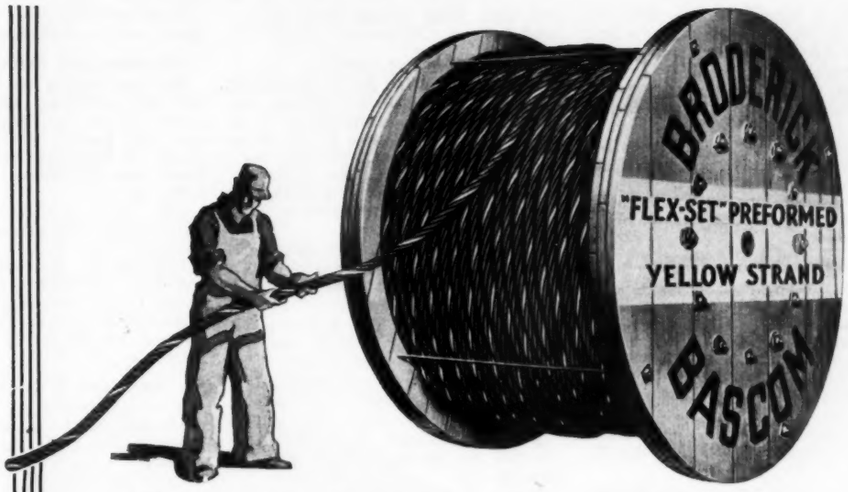
R-7



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are distributors of Broderick & Bascom Oil Field Lines in all Mid-Continent Fields. All stores carry ample stocks of "Flex-Set" Preformed Yellow Strand Rotary Lines and other excellent B & B products.

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Broderick & Bascom Rope Co., *St. Louis*

FACTORIES: St. Louis and Seattle.

"Flex-Set" Preformed Yellow Strand Rotary Drilling Lines

Co.'s No. 3 Witty, NE cor. NW SW Section 22-7-8, was abandoned at a total depth of 1,194 feet, after finding water in the sand.

Empire Oil & Refining Co.'s No. 1 Billington, SW cor. Section 31-7-5, is a rig.

Funk & Saxon's No. 1 Witty, SE cor. SW NW Section 22-7-8, was abandoned at a total depth of 1,202 feet.

Mid-Continent Petroleum Corp.'s No. 7 Factor, CNL NE SE Section 15-7-8, is a machine.

Noble and Payne Counties

In the Lucien Pool, Noble County, Stanolind Oil & Gas Co. and Amerada Petroleum Corp.'s No. 1 Bohn, C NE NE Section 29-20-2w, Noble County, flowed 945 bbls. of oil in 24 hours from Wilcox sand at 4,984-5,144 feet. The top of the second Wilcox sand was found at 5,068 feet.

Carter Oil Co. was digging a cellar for No. 1 Henn, C NW SE Section 29-20-2w.

Sinclair Prairie Oil Co. was building a rig for No. 2 Bohn, C SW NE Section 29-20-3w. Same company's No. 1 Bohn, C NW NE Section 29-20-2w, flowed 300 bbls. of oil while drilling in the second Wilcox sand at 5,086 feet. The top of the second Wilcox sand was 5,085 feet.

Mulberry Oil Co.'s No. 4 Fisher (twin), SW cor. NE Section 27-19-4, Payne County, was completed for 694 bbls. of oil and 3,000,000 feet of gas a day, after being treated with acid. The oil was found in the Viola lime at 3,762-3,820 feet.

Logan, Garfield and Pawnee Counties

The north offset to the discovery well in the Crescent Pool, Logan County, was completed during the past week and made 7,799 bbls. of oil in 24 hours and the next 24 hours it made 3,334 bbls. through 2½-inch tubing. The well is Carter Oil Co. and Gypsy Oil Co.'s No. 1 Herron, C SE NE Section 28-17-4w. The sand was found at 6,204 feet and the total depth was 6,239 feet.

The only new operation in the Crescent Pool was the Amerada Petroleum Corp.'s No. 2 Denny, C NE NE Section 33-17-4w. It was a rig moving in.

The wildcat test of the Argo Oil & Gas Co.'s No. 1 Dickman, SW cor. SE Section 13-24-3w, Garfield County, started drilling during the week and was down 1,400 feet.

Washoma Petroleum Co. was moving in material for a test to be drilled 3,250 feet, No. 1 Buffalo, NW cor. SE NE Section 33-22-5, Pawnee County.

Pittsburg County

Utilities Production Co.'s No. 2 Riddle, NE cor. Section 16-7-18, Pittsburg County, was spudding.

Pontotoc County

Amerada Petroleum Corp.'s No. 1 Jones, SE cor. NW Section 5-6-5, Pontotoc County was completed for 835 bbls. of oil a day after being treated with acid. The oil was found at 4,184-88 feet.

Sinclair Prairie Oil Co. and others' No. 1 Bruno, NW cor. Section 6-6-5, found water in the Wilcox sand at 4,110-25 feet and is being plugged back to test a showing in the dolomite at 4,085-4,122 feet.

Moore and Denver Producing & Refining Co.'s No. 1 Gray, C SE SW NE Section 25-5-4, was completed for 860 bbls. of oil from the Viola lime at 2,473-86 feet.

P. J. Shoner's No. 1 Standridge, NE cor. NW SE Section 25-5-4, has been completed making 20 bbls. a day on the pump, from 2,717-35 feet.

Benedum-Trees' No. 1 Jacobs, NE cor. SW SW Section 28-5-5 (an old well drilling deeper), was completed for 130 bbls. a day on the pump. The old total depth was 1,460 feet and it was drilled to 2,365 feet. It was also treated with acid.

Stanolind Oil & Gas Co. and Amerada Petroleum Corp.'s No. 1 Aldridge, C N half S SE Section 2-5-7, was put on the pump and completed for 35 bbls. a day after being plugged back from a total depth of 4,295 feet to 2,643-75 feet.

Okmulgee County

Sheldon Oil Co.'s No. 1 Unallotted, SE cor. NW NW Section 8-16-11, Okmulgee County, was completed as a dry hole and abandoned after finding water in the Wilcox sand at 2,772-2,802 feet.

C. D. Klingensmith's No. 1 Watson, SE cor. SW SE Section 33-16-11, was abandoned in the Tanaha sand at 2,066 feet.

Sheridan Oil Co.'s No. 6 Peters, SE cor. NW SE SE Section 33-16-11, swabbed 50 bbls. a day from the Tanaha sand at 1,996-2,045 feet.

Harmon Brothers' No. 2 Harjo, NE cor. SW SE Section 6-15-12, was dry at 604 feet and was abandoned.

Sheridan Oil Co.'s No. 1 Adams, CEL SW NW Section 24-16-11, is a rig moving in for a Wilcox sand test.

Bingham Brothers' No. 6 Bosh, SE cor. NE NE Section 36-14-12, was rigging up.

Cusack & Rousville's No. 3 Johnson, SE cor. NW SW Section 29-12-12, was making 4,000,000 feet of gas from the Booch sand at 1,895-1,914 feet.

Oklahoma and Okfuskee Counties

Wofford Drilling Co. and Skelly Oil Co.'s No. 4 Military Addition, 900 feet north and 411 feet west from the SE cor. SW Section 34-12-3w, Oklahoma County, flowed 1,319 bbls. of oil in four hours from the Wilcox sand at 6,345-6,491 feet.

Carl Larkin and others' No. 1 Johnson, C S half NE SE Section 22-11-3w, is a rig.

H. Steckoll's No. 3-A Hilderbrandt, SW cor. SE SE Section 16-11-11, Okfuskee County, was rigging up.

Steckoll & Durkee's No. 1-A Johnson, SW cor. NE SE Section 2-10-11, was a rig on the ground.

Tulsa and Wagoner Counties

R. T. Kistler and others' No. 2 Carr, CWL NW SW NE, Section 23-18-14, Tulsa County, found the Burgess sand dry and it was abandoned at 1,389 feet.

C. A. Mechling's No. 7 Nave, C NE SE Section 25-18-14, was drilling at 1,100 feet.

D. Morgan's No. 4 Johnson, SW cor. NW SE Section 35-18-14, was drilling at 550 feet.

Kiskaddon and others' No. 1 Berry, SE cor. NW SE Section 17-17-14, was drilling at 150 feet.

R. O. Neal Gasoline Co.'s No. 1 Lewis, SE cor. NE NW Section 36-17-14, was drilling at 250 feet.

R. K. Marrs' No. 1 Island, SE cor. NW NW Section 14-17-15, Wagoner County, was a machine moving in.

McIntire and others' No. 6 Tiger, SE cor. NE NW Section 2-17-15, is a machine rigging up.

In Southern Oklahoma

Carter Oil Co. and others' No. 2 Humble-Hefner, C NW NE NE Section 16-2-2w, Carter County, has been completed making 15 bbls. a day on the pump from 1,061-90 feet. Total depth was 1,139 feet. Same company's No. 1 Morgan, C NE NW SW Section 4-1-3w, was pumping 12 bbls. a day from sand at 2,370-2,419 feet. Same company's No. 2 A. Hooks, SE cor. NW NW Section 19-1-2w, was estimated to be making 8,000,000 feet of gas a day from 1,401-80 feet.

Wildcat Operations in Oklahoma

(Continued from Preceding Page)

LINCOLN COUNTY

Amerada Pet. and Stanolind O. & G. Co.'s No. 1 Martinek, NW SE Sec. 35-13-5e ..... Swabbed 580 bbls. oil and 185 bbls. wtr. at 4,230-88 ft.; comp.
Anderson & Kerr's No. 1 Huckabee, SW cor. Sec. 9-15-2.. Drlg. 3,440 ft.
Huckleberry et al's No. 1 Boland, SW cor. Sec. 25-12-3e.. Sand 5,455-61 ft.; pumped 440 bbls.; comp.
Harvey Newman Oil Co.'s No. 1 Rueb, C NW NE Sec. 23-15-5 ..... Cellar
I. T. I. O. Co.'s No. 1 Stanley, C SE NE NW Sec. 33-14-3 ..... Abnd. 5,313 ft.

LOGAN COUNTY

Anderson & Kerr's No. 1-A Hull, 455 ft. S, 330 ft. W of E cor. Sec. 11-18-4w ..... Sand 4,775-83 ft.; flowed 355 bbls.
W. N. Anthony's No. 1 Fruin, SE SW Sec. 4-16-1 ..... Rig.
Amerada and Stanolind's No. 1 Fouts, NW NE Sec. 14-17-1w ..... Wilcox sand 5,098-5,102 ft.; flowed 650 bbls. in 24 hrs.; second Wilcox 5,240-46 ft.; H.F.W.; plugged back to first Wilcox; swabbed 140 bbls.
Barnadall Oil Co. et al's No. 1 Seyller, NE SE Sec. 12-15-4w ..... Wilcox sand 6,590-6,621 ft.; wtr.
Jadeka Dev. Co.'s No. 1 Frakes, C SW NE SW Sec. 16-15-6w ..... S.D. 2,531 ft.

OKLAHOMA COUNTY

Gypsy Oil Co. et al's No. 1 Harris, C SW NE Sec. 27-13-4w ..... Location.
Springrose Drlg. Co.'s No. 1 Edwards, C SE Sec. 19-11-1 ..... T.D. 6,079 ft.; acidized in Hunton lime; flowed 63 bbls. by heads in 24 hrs.; 2 per cent wtr.; running tubing.

OSAGE COUNTY

Peters Pet. Co. and Norbla Oil Co.'s No. 1, SW cor. Sec. 15-25-5 ..... Drlg. 300 ft.
Empire O. & R. Co.'s No. 1, SE NE Sec. 3-25-3 ..... Drlg. 575 ft.

PAWNEE COUNTY

Geo. Thomas' No. 1 School Land, SW cor. Sec. 13-20-5.. Drlg. 750 ft.

PITTSBURG COUNTY

Arkhoma's No. 1 Cummings, NW NE SE Sec. 6-4-12.. Fishing 515 ft.
W. E. Hailey's No. 1 Drew, NW SW Sec. 21-3-14w ..... Spudded.
Mid-Western Oil & Gas Co.'s No. 1 Shelton, CSL SE NW Sec. 7-7-18 ..... Drlg. 2,135 ft.
Moffett & Hall's No. 1 Jones, C NE NW Sec. 14-3-14 .... Lost tools; T.D. 3,200 ft.; S.D.
C. L. Carlock's No. 1 Chunn, SE NW Sec. 29-4-14 ..... Moving in tools.

PONTOTOC COUNTY

E. M. Blanchard's No. 1 Crabtree, NE SE NE Sec. 27-2-6.. Rig on ground.
Stanolind-Amerada's No. 1 Aldridge, C N½ S½ SE Sec. 2-5-7 ..... Swbd. 20 bbls. oil, 20 bbls. wtr. from Gilcrease sand; pumped 35 bbls.; comp. 2,643-75 ft.
Emanuel, Rudman & Hatcher's No. 1 Mayer, C SW SE NW Sec. 7-3-8 ..... Spudding.
Delaney et al's No. 1 Dawes-Hardin, SE NW Sec. 30-2-7.. Drlg. 1,250 ft.

POTTAWATOMIE COUNTY

Texas Pacific's No. 1 Franklin, SW NW SW Sec. 10-9-4. Drlg. 3,115 ft.
W. E. Witt et al's No. 1 Atwater-Fundis, NE NW NE Sec. 33-8-3 ..... Cellar.

SEMINOLE COUNTY

John Burns' No. 1-B Shepard, SE NE Sec. 4-8-8 (O. W.D.D.) ..... T.D. 1,658 ft.; abnd.
Carter Oil Co. et al's No. 1 Jarvis, C E½ NE SW Sec. 18-10-6 ..... Drlg. 4,596 ft.
Harman Oil Co.'s No. 1 Bowlegs, SE NE SW Sec. 1-7-7 ..... T.D. 1,643 ft.
Flemlee et al's No. 1 Bowlegs, SE NE SW Sec. 1-7-7.... S.D. 1,260 ft.

Southern Oklahoma

ATOKA COUNTY

J. D. Boukan's No. 1 Howard, NW SW NW Sec. 20-2s-10e. Drlg. 1,135 ft.
Brookshire et al's No. 1 Rowland, NW NE NE Sec. 18-3s-10e ..... T.D. 3,443 ft.; fishing.

CARTER COUNTY

Angle & Lundy's No. 1-A Ringling, NE SW SW Sec. 11-5s-1w ..... Abnd. 3,251 ft.

GARVIN COUNTY

National Prod. Co.'s No. 1 Littrell, NE cor. Sec. 31-2n-3w. S.D. 299 ft.

McINTOSH COUNTY

Malernee et al's No. 1, NW SE Sec. 36-12-13..... Drlg. 1,360 ft.

MARSHALL COUNTY

Paul Robb's No. 1 Vittetoe, C NE SE Sec. 11-5s-4e..... T.D. 3,517 ft., will deepen.

MURRAY COUNTY

T. E. Revell et al's No. 1 Wolfe, NE cor. Sec. 18-1-2.... Drlg. 2,140 ft.

PUSHMATAHA COUNTY

J. V. Scrivener et al's No. 1 Swink, C NE SE Sec. 29-6s-20e ..... Setting csg. 410 ft.
Whitehead et al's No. 1 Messer, SE SW SW Sec. 35-3s-18e. T.D. 2,405 ft.; S.D.

STEPHENS COUNTY

J. W. Madison's No. 1 Tussey, SW SE NW Sec. 24-1n-4w.. S.D. 3,210 ft.
Geo. Pace et al's No. 1 Siever, SE SW Sec. 4-1n-7w ..... Rig.
MacMa-Oil Co.'s No. 1 Butler, SW NW SE Sec. 36-2n-7w.. S.D. 20 ft.

TILLMAN COUNTY

J. H. Everett's No. 1 Crane, SW cor. Sec. 15-3s-14w ..... Rig.

President J. M. Lovejoy's Report on Seaboard Oil

Report of Seaboard Oil Co. of Delaware and subsidiaries for year ended December 31, 1933, certified by independent auditors, shows net profit of $1,275,565 after intangible development costs, depreciation, depletion, property abandonments, lease amortization, provision for contingencies, Federal taxes, etc., equivalent to $1.02 a share on 1,244,383 no-par shares of capital stock. This compares with $858,172, or 71 cents a share on 1,204,460 shares in 1932.

Discussing the company's holdings in Venezuela, President John M. Lovejoy states:

"Our company owns a 22½ per cent interest in large acreage holdings in eastern Venezuela, under development by Creole Petroleum Corp. In March, 1933, a test immediately offsetting these holdings blew in with substantial amounts of oil and gas, found at a shallow depth. A well on our jointly owned property has encountered similar oil and gas sands. However, it has not been possible to put either of these wells on commercial production, due to soft and unconsolidated sands which tend to flow with the oil. Further work is now in progress."

In Canada a second test on the company's holdings showed the presence of a small amount of gas and after further geological study a new location has been selected and another well is being drilled.

Discussing the company's holdings near Cayuga, Anderson County, Texas, where it owns, with the Tide Water Oil Co., 14,000 acres, and where it completed a well yielding 3,000 bbls. of 29 gravity oil daily, Mr. Lovejoy states that considerable additional drilling must be undertaken before it will be possible to estimate the area of the field or its productive possibilities.

The company's production in Mexico remains about the same, but due to materially increased prices in the latter part of the year, profit from that end of Seaboard's business showed much improvement.

The Buttonwillow gas field in California remained closed down during the year and the company fulfilled its contract with the Pacific Gas & Electric Co., for gas, from Kettleman Hills. Deliveries averaged 36,000,000 feet daily, which increased to 38,000,000 feet per day in 1934.

JESSE T. HAMILTON DEAD

DALLAS, Tex., Apr. 2.—Jesse T. Hamilton, 58, widely known oil scout, who had participated in the development of virtually every major oil field in Texas, died in a hospital here after a long illness. He was born near Tyler, Tex.

MEN WHO LIVE FOR TOMORROW

FOR certain scientists of the Gulf Refining Company, the present does not exist. Their eyes are on the future—for their duty is to forecast tomorrow's motoring needs.

These men must bring to their tasks a gift for scientific prophecy and a genius for perserverance. Theirs is a task in which science must live happily mated with imagination.

Will changing engine design call for a radically different motor fuel? These men must develop and perfect it. Will tomorrow's streamlined cars call for an oil able to resist airplane speeds? These men must make such an oil a fact.

Already the results of their foresight have been notable. For out of the Gulf Research Laboratories came the Alchlor process of refining motor oil—probably the most significant single achievement in the history of lubrication.

From these laboratories came Gulf's process for retarding gasoline deterioration. From them, too, came a process which cut the cost ten times over of an essential industrial chemical.

Gulf products *could* be kept abreast of the times without the Gulf Research Laboratories. But in any contest for leadership, the laurels must go to the organization that walks with eyes fixed ahead.

GULF REFINING COMPANY

Emergency in California Field Reported to Ickes Following Cancellation of Crude Contracts

By L. P. STOCKMAN
Staff Correspondent, California Fields

LOS ANGELES, Calif., Apr. 2.—Operators in the Playa Del Rey Field who were left without an outlet for current production when buyers recently canceled day to day contracts have been making strenuous efforts to induce major companies to resume crude purchases at posted prices. Most of the majors are willing to begin taking Playa Del Rey oil again but one or two do not want this type of crude. Unless buyers get together soon the situation may become further complicated and force drastic price reductions in other fields. During the past week, operators at Del Rey have been obliged to dispose of production at prices substantially below regular quotations and a further check indicates that a relatively large buyer in the Long Beach Field recently canceled a number of day to day contracts and later offered to buy the same oil at 40 cents under the prevailing market. It is obvious this situaton must be remedied before any lasting improvement can take place in the refined oil market. Operators are hopeful existing chaotic conditions will be corrected, although indictment of several marketers has tended to intensify conditions.

R. A. Broomfield, vice president of the Oil Producers Sales Agency, and senior officer in the absence of President Ralph Lloyd, recently dispatched a telegram to Secretary of Interior Ickes and a copy to the chairman of the Planning and Co-ordination Committee, to the effect that, "since forwarding copy of resolutions passed by board of directors of sales agency, we find our worst fears being realized and that crude price structures in other fields commencing to break down. One major company has today canceled all day to day contracts at posted price in Long Beach Field and offered to purchase same oil at 40 cents per barrel under market price. Emergency exists in California requiring immediate conciliation leading to restoration of co-operation by leaders of industry if we are to avoid disastrous consequences to economic structures of industrial units of California oil industry and the welfare of employes."

Code Upheld

Because California has an industrial recovery act, patterned after the National Recovery Act and meant to complement and sustain national legislation, Superior Judge James, in a decision rendered at San Jose, ruled that NRA blue eagle subscribers whose activities come within the scope of the state act must conform to the national act. Judge James ruled the national act cannot regulate business conducted entirely within the boundaries of an individual state, but where a state conformance code exists, as in California, the state act applies and is therefore enforceable. The case was the result of cleaners and dyers in San Jose attempting to compel recalcitrants to maintain uniform prices.

Code Violations

Federal attorneys, representing the Attorney General, filed charges against 20 operators in the Huntington Beach Field a few days ago, charging violation of the petroleum code, and it is the present intention to go right down the line and file similar complaints against other operators charged with failing to conform to curtailment provisions. Operators cited this week and the excess charged against each include E. K. Allison Syndicate with an excess production of 21,115 bbls.; American Petroleum Corp., 35,999 bbls.; Beloil Corp., 49,107 bbls.; Bestmi Petroleum Corp., 20,325 bbls.; Bruce Brothers, 6,685 bbls.; Centralia Oil Co., 20,985 bbls.; DeVap Corp., 5,792 bbls.; Hammil Corp., 9,975 bbls.; R. B. McKeon, 15,371 bbls.; Milton Oil Co., 6,061 bbls.; Minnesota Oil Co., 10,196 bbls.; Montana Petroleum Corp., 15,105 bbls.; Petrol Corp., 218,386 bbls.; Smith & Dea Co., 2,851 bbls.; Southern California Drilling Co., 19,675 bbls.; S. & R. Oil Co., 9,482 bbls.; Tide Petroleum Co., 35,254 bbls.; Western States Drilling Co., 63,055 bbls.; Windsor Oil Co., 47,221 bbls., and the W. K. Co., 79,822 bbls.

Federal Judge Cosgrave set April 9 as the date of hearing on an order to show cause why a temporary oil restriction injunction should not be issued and why receivers should not be appointed to conduct production activities in accordance with code compliance. The complaints filed this week, and which were similar to those filed against the Wilshire Oil Co. December 14, 1933, charge the various defendants with exceeding the California monthly oil quotas for the respective companies since the quota schedule went into effect last September. The Wilshire case, which came up for hearing recently, was postponed until April 23 upon motion of government counsel, as the Wilshire company has petitioned Secretary Ickes to review the case.

Petroleum Trade Association

The committee on organization appointed by the mass meeting of operators February 5, 1934, charged with the duty of preparing and submitting to the industry a suggested form of organization for a petroleum trade association for California, submitted its report a few days ago and action will be taken in the near future.

To be truly representative, the association must make a place for every producer and refiner within its active membership. To do this, sponsors of the association have provided for 17 operating producer directors who shall represent producing districts and who will be known as Class O directors. Independent refiners shall have five directors who will be known as Class R directors. Major companies initially shall have seven representatives to be known as Class S directors. The majors are known as sustaining companies and are given specific representation by reason of their peculiar position in the industry. The total initial board will have seats for 29 directors and a full board in session will represent a complete cross section of the California industry.

District No. 1, under the proposed set-up, comprises Long Beach, Seal Beach and Alamitos Heights; district No. 2, Santa Fe Springs and Montebello; district No. 3, Huntington Beach and Newport; district No. 4, Brea Olinda, Coyote Hills, Richfield and Whittier; district No. 5, Inglewood, Lawndale and Los Angeles City Field; district No. 6, Playa Del Rey, Torrance and Potrero; district No. 7, Dominguez and Rosecrans; district No. 8, Lost Hills, Belridge and McKittrick; district No. 9, Elk Hills and Buena Vista Hills; district No. 10, Coalinga; district No. 11, Fruitvale, Mountain View, and Wheeler Ridge; district No. 12, Kern River, Mount Poso, Coffee Canyon and Round Mountain; district No. 13, Kettleman Hills; district No. 14, Midway-Sunset; district No. 15, Ventura Avenue; district No. 16, Ventura-Newhall and balance of Ventura County fields; district No. 17, Elwood, Santa Maria, balance of Santa Barbara County and remainder of coastal fields.

Mountain View

The Mountain View Field of Kern County, following a desultory period of development since completion of the discovery well last year, is now well on the way toward aggressive development and appears assured of becoming California's next hot spot. Recent completions have indicated that the top of the Mountain View structure and the area of largest production is several miles northwest of the Hogan area where the discovery well was finished and in which section the Shell concentrated its acreage a few years ago.

Completion of two large flowing wells in the field this week is expected to greatly stimulate drilling operations. It is probable the central committee of California oil producers, representing the petroleum administrator, will be obliged to initiate further action to expand the area covered in the original agreement to give all operators an even break and systemize future drilling. The original development agreement, approved by Secretary Ickes, covered only a limited area as the trend of the structure had not been determined up to that time.

New Completions

The Mohawk Oil Co., following an aggressive drilling program, added a new well in the Mountain View Field a few days ago when No. 1 McKeehan was finished flowing 2,987 bbls. of 34.6 gravity oil per day. The well appears to be showing an increasing tendency and may therefore show a substantially higher initial after it has cleaned itself out. This new well, in Section 24-30-29, was bottomed at 5,745 feet and has an 8⅝-inch water string landed and cemented at 5,267 feet. This is the third big well to be finished in the Mountain View Field by the Mohawk interests and climaxes a persistent drilling program in that area. After the Shell began pioneer work in this area several years ago and did not experience much success, it farmed out several leases to the Mohawk interests and the latter drilled several dusters in the Hogan section. The company within the last year swung away from the Hogan or Wharton area and began tying up leases northwest of the discovery well. The Mohawk has just spudded in a second well on the Clendennen lease in Section 30-30-29, and will probably stake several additional locations within a few days.

Hogan Petroleum Co., the first operator to develop commercial production in the Mountain View Field, finished No. 3 Porter-Day early in the current week and this new well showed an initial of 1,445 bbls. of 34.3 gravity oil and 340,000 feet of gas per day. This project, bottomed at 5,804 feet and finished with a 5¾-inch perforated liner, is flowing through a forty-four-sixty-fourth inch bean under a pressure of 180 pounds on the tubing and 1,020 pounds on the casing. The first two completions on the Porter-Day lease were duds as neither is able to make over 150 bbls. per day. Both Nos. 1 and 2 on this lease were drilled by Shell but turned over to the Hogan Petroleum Co. a few months ago. No. 1 showed a potential of about 2,000 bbls. per day on a preliminary test a few years ago but Shell was never able to develop a sustained production. The Hogan interests have likewise found it impossible to stimulate the well's production.

Other Work

Two abandonments were chalked up in the Mountain View Field but neither will have any effect on future drilling since they are both in the Hogan area. Hogan Petroleum has finally decided to abandon No. 1 Haley in Section 29-30-29, due to the inability to deviate the hole sufficiently to intercept the

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

	March 18		March 4			
Intercoastal-domestic—	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Crude oil	.....	.....	.....	.....	92,770	.....
Fuel oil	493,201	71,172	129,647	18,521	3,633,752	307,003
Diesel and gas oil	.....	.....	147,293	21,042	493,144	926,394
Gasoline	251,592	35,942	148,259	21,180	1,070,610	1,364,498
Kerosene	.....	.....	.....	.....	303,121	411,076
Other finished oil	.....	.....	.....	.....	.....	30,635
Other unfinished oil	.....	.....	.....	.....	.....	72,584
Foreign exports—						
Crude oil	111,400	15,914	191,385	27,341	1,565,993	1,418,108
Fuel oil	26,267	3,752	163,487	23,355	2,151,411	1,434,599
Diesel and gas oil	24,587	3,512	20,171	2,882	846,295	783,114
Gasoline	109,195	15,599	63,551	9,079	871,786	1,188,025
Kerosene	.....	.....	19,576	2,797	226,942	485,674
Other unfinished oil	.....	.....	.....	.....	34,363	.....
Coastwise-domestic—						
Crude oil	96,561	13,794	251,723	35,960	1,227,332	2,798,963
Fuel oil	134,440	19,206	382,110	54,587	2,512,175	2,586,912
Diesel and gas oil	2,844	406	.....	.....	135,538	398,033
Gasoline	165,546	24,078	96,155	13,737	1,990,764	2,668,844
Kerosene	923	90	3,023	432	29,828	46,784
Naphtha distillates	.....	.....	.....	.....	.....	27,651

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic—						
Diesel and gas oil	.....	.....	.....	.....	313,695	280,531
Gasoline	.....	.....	.....	.....	72,625	239,016
Kerosene	79,450	11,350	.....	.....	160,375	311,855
Lubricants	.....	.....	.....	.....	8,310	8,250
Foreign exports—						
Crude oil	2,926	418	74,182	10,597	445,928	320,286
Fuel oil	20,142	2,892	.....	.....	196,629	190,939
Diesel and gas oil	74,810	10,687	5,402	772	405,390	300,145
Gasoline	303,782	43,397	.....	.....	869,689	1,152,418
Kerosene	80,533	10,505	.....	.....	212,195	167,050
Lubricants	14,047	2,007	.....	.....	35,507	38,356
Coastwise-domestic—						
Fuel oil	.....	.....	83,167	11,881	695,769	714,045
Diesel and gas oil	1,477	211	1,498	214	52,262	142,550
Gasoline	208,457	29,780	121,827	17,404	794,638	812,547
Kerosene	2,876	411	.....	.....	27,597	43,490

productive zone within the confines of the lease. A. T. Jergins Trust, after running into mechanical trouble in No. 1 Bloemer in Section 29-30-29, has filed an abandonment notice on the well at 5,787 feet.

Another potential producer is expected to be completed in Mountain View within 10 days and it is probable several more in the northwest area will be tanking oil before the close of April. Beginning around the middle of May we may anticipate a substantial increase in the number of completions as conditions are conducive to fast drilling. The next completion should be O'Kane and Brain's No. 1 Wright-Bloemer in Section 30-30-29, as the crew has just started drilling out the cement following the landing of an 8⅝-inch water string at 5,470 feet. This well is about midway between No. 1 Hood and No. 1 Clendennen of the Mohawk, both commercial producers.

Kettleman Hills

E. S. Armstrong, J. E. Babcock, F. C. Dougherty and Louise C. Koons have filed suit in the Superior Court at Los Angeles against the Kettleman North Dome Association and others and petitioned the court to construe the terms of the various contracts designed to regulate production of the North Dome. The complaint alleges that Kenda, by action of its directors, arbitrarily contracted the participating acreage in such a way that property of the plaintiffs is being drained and participating revenue of each has been reduced by reason of the contraction in acreage.

The Kettleman North Dome Association has staked locations for four new wells in the North Dome. Two of the new wells are being drilled to determine the limits of production and they should either extend the present accepted limits or result in a contraction of present participating acreage. One of these outposts is No. 73-2U located in the extreme eastern end of the field well out on the nose of the structure in Section 2-23-18. Out of the north flank in Section 16-22-18, Kenda has staked location for No. 55-16Q and the location indicates it is just outside the red or inner line which encloses the irreducible acreage participating in the unit plan. There are several potential producers nearing completion in the North Dome and one of this group, Standard's No. 36-35J should be given a production test within a week as it is standing cemented at 7,274 feet with bottom of the hole at 8,391 feet.

Montebello

The Montebello Field of Los Angeles Basin, like Mountain View, bids fair to experience a rather active period during the remainder of 1934 if the number of new wells being started is any criterion. Drilling time in the two fields is quite different, however, as the hard formations encountered in Montebello require from four to six months from spud to completion. This time will, of course, be reduced after operators get a line on subsurface conditions particularly since some of this work will be located well up on the structure and will not require as much hole.

Standard is building rigs for three new wells on the Baldwin lease which will be carried to the deep Cruz zone discovered by Universal Consolidated last year. Standard's new wells are Nos. 74, 75 and 76 and when these are spudded in the company will have seven strings of tools in operation. Texas Co. has three wells under way, Universal two, and St. Helens Petroleum and Community Oil Co. one each. Universal is believed to have cored the top of the Cruz zone in No. 1 Repetto at 7,400 feet and while this is deeper than the same horizon was logged in No. 1 Cruz the company may still succeed in developing commercial production.

Long Beach

Three fairly good wells were finished in the Long Beach Field early in the week and a check indicates probable completion of several more within a fortnight. Allied Petroleum Co. finished No. 13 Signal, brought in on a compressor doing 694 bbls. of clean 26.9 gravity oil per day from the shallow zone at 4,690 feet. Utah Oil & Drilling Co.'s No. 1 Clarke, bottomed at 4,695 feet and finished with a 6⅝-inch water string landed at 4,042 feet and a 4¾-inch liner carrying 651 feet of perforated, registered an initial daily production of 404 bbls. of 27.1 gravity oil on the beam. Deleske Petroleum's No. 3 Long Beach, bottomed at 4,932 feet and finished with a 6⅝-inch water string landed at 4,710 feet, was brought in pumping 101 bbls. of 23.7 gravity oil per day.

Santa Fe Springs

Recent completion of Buckeye Union Oil Co.'s No. 1 Irish, pumping 166 bbls. of 35.7 gravity oil per day in the Santa Fe Springs Field, is expected to result in additional reconditioning work. This well, completed during the intensive development following discovery of the field by Union Oil Co., was finished at 4,729 feet. Buckeye Union re-entered the hole early this year and decided to drill a few feet to stimulate production. The hole was deepened to 4,780 feet and finished with a 4½-inch liner with 40 feet of perforations and cemented through perforations at 4,740 feet. The well tested wet on a preliminary test and subsequently found water at 4,770-80 feet. The hole was plugged back to 4,690 feet and recompleted. Buckeye Union has a number of other producing wells on the Irish lease that might justify reconditioning work.

Judging by the rapidity with which work is being started in the Inglewood Field, this district will become rather active later this year. Inglewood, unlike Mountain View, will not show a very large number of new wells as the development agreement approved by the petroleum administrator limits the number each operator may drill during the year. Deep zone development in the Montebello Field, on the other hand, is progressing despite the failure of operators to decide on a drilling program. Mountain View development work is subject to revision due to extension of the field's limits. Standard has started rig construction for its first deep zone well in the Inglewood Field, No. 27 Vickers, which should begin making hole within 15 days. Associated's No. 2 Vickers, a deep zone well put on production a week or so ago, died after producing for a week and is being prepared for the pump.

Midway-Sunset

Honolulu Oil Corp. completed another good well in the Midway-Sunset Field of Kern County. This new well, in Section 14-32-24, was brought in flowing 584 bbls. of 25.6 gravity oil per day from 2,894 feet after the hole had been plugged back from 2,930 feet because of the coring of a gray sand that looked like it might be water bearing. Honolulu has finished several wells in this area and the success of the company has prompted the Standard to undertake offset work. The latter is drilling one new well in Section 11 and another in Section 15, both of which adjoin the acreage being developed by Honolulu.

Honolulu Oil Corp.'s No. 18-1A, a recent completion in the Round Mountain Field of Kern County, has shown a substantial increase since being brought in last week with the result production has increased to 460 bbls. per day. In the Capitan Field of Santa Barbara County, Shell has finished No. 2 Orella pumping 27 bbls. of clean 18.9 gravity oil per day from 1,764 feet. The oil sand pinched out at this point and the company was able to produce only from 15 feet of formation. General Petroleum is expected to spud in No. 9 Erburur within a few days. The Elwood Field is showing a slight increase in drilling, although operators are not showing any great anxiety to undertake exploitation of the Sespe. Signal Oil & Gas Co.'s No. 2 on tideland permit No. 89 came in as a gasser following completion at 5,112 feet. It failed to show any oil but was finished flowing 1,400,000 feet of natural gas per day. Fred Cole has landed liner in his No. 1 McMillan, which showed substantial production on a preliminary test two weeks ago. This is the largest well finished in the Santa Barbara Mesa in several years, but like other wells in that section it failed to show sustained production.

Lost Hills-Belridge

There was no substantial change in the status of deep tests in the Lost Hills and Belridge Fields. General Petroleum's No. 1 Berry at South Belridge has taken on a dubious outlook although the formation at 10,700 feet has changed from the brown shale to a light sandy shale. This may mean the bit has encountered the Temblor, in which event the well may have a chance if the company can drill deep enough. This well has been relatively free from mechanical trouble and has made good footage at a minimum cost. Associated's No. 1 Williamson has proved a very costly job, but this is not due to inefficient drilling as mechanical trouble has been a negligible factor. Difficulty with high head waters has retarded drilling several times and has necessitated setting of two water strings at points where no trouble was expected. Union Oil Co. is expected to finish No. 18 Belridge in the North Belridge Field within 15 days, although if this well is carried to the Eocene, completion will be delayed another 30 days. It is the present intention to complete the well in the Temblor, although the objective may be changed as much depends upon the showing of the Temblor.

IMPORTANT SOUTHERN CALIFORNIA WILDCATS

Company, well and location—	S-T-R	Depth	Status
Clayton, G. L., No. 1 Clearwater, Los Angeles Co.	31- 3-12	5,171	sd. sh. drilling
Pacific Dev. Co., No. 1 Watts, Los Angeles Co.	16- 3-13	3,879	suspended
Oklahoma Oil Corp., No. 1 Hermosa, Los Angeles Co.	31- 3-14	....	material
Dominguez Oil Co., No. 1 Dominguez, Los Angeles Co.	34- 3-13	2,053	sd. sh. drilling
Quinn, J. B., No. 1 Dominguez, Los Angeles Co.	3- 4-13	3,101	sd. sh. drilling
Mutual Oil Co., No. 1 Dominguez, Los Angeles Co.	3- 4-13	4,511	cemented
Kelly & Son, No. 1 Torrance, Los Angeles Co.	7- 4-13	6,435	suspended
Wehrman, J. K., No. 1 San Pedro, Los Angeles Co.	14- 5-14	1,597	fishing D/P
Nudson, T. T., No. 1 Inglewood, Los Angeles Co.	17- 2-14	1,911	cleaning out
Pacific Western, No. 16 Inglewood Deep, Los Angeles Co.	8- 2-14	2,103	sd. sh. drilling
Scientia Oil Co., No. 1 Inglewood, Los Angeles Co.	7- 2-14	rig	suspended
Standard Oil Co., No. 1 Inglewood Deep, Los Angeles Co.	7- 2-14	mtl.	building rig
Kieps Oil Co., No. 1 Inglewood, Los Angeles Co.	17- 2-14	rig	rigging up
Wilshire, No. 2 Potrero Deep, Los Angeles Co.	27- 2-14	5,394	sd. sh. drilling
Community Oil Co., No. 1 Montebello, Los Angeles Co.	34- 1-11	7,071	sd. sh. drilling
Community Oil Co., No. 2 Montebello, Los Angeles Co.	34- 1-11	....	material
Universal Consd., No. 2 Montebello Deep, Los Angeles Co.	5- 2-11	6,950	suspended
Universal Consd., No. 3 Montebello Deep, Los Angeles Co.	5- 2-11	7,401	O.S. drilling
Texas Co., No. 1 Montebello Deep, Los Angeles Co.	6- 2-11	5,471	sd. sh. drilling
Standard, No. 1 Montebello Deep, Los Angeles Co.	6- 2-11	3,891	sd. sh. drilling
St. Helens, No. 1 Montebello Deep, Los Angeles Co.	6- 2-11	591	sd. sh. drilling
Pioneer Oil Co., No. 1 Pico, Los Angeles Co.	7- 2-11	rig	rigging up
Rex Anglin Dev. Co., No. 1 Los Nietos, Los Angeles Co.	29- 2-11	150	suspended
Eldorado Pet., No. 1 Puento, Los Angeles Co.	30- 2- 9	3,116	suspended
Barstow Oil Co., No. 1 Saugus, Los Angeles Co.	35- 5-16	2,126	suspended
International Dev. Co., No. 1 Saugus, Los Angeles Co.	34- 5-16	rig	suspended
Alexander, W. L., No. 1 Sunland, Los Angeles Co.	7- 2-14	1,004	hd. sd. drilling
Black Eagle Oil Co. No. 1 Huntington, Orange Co.	tideland	3,962	reaming
Nuoil Co., No. 1 Newport, Orange Co.	29- 6-10	6,350	sd. sh. drilling
Recovery Oil Co., No. 1 Sunset Beach, Orange Co.	16- 5-11	3,400	suspended
Superior Oil Co., No. 1 Sunset Beach, Orange Co.	19- 5-11	5,811	redrill 5,183
Placentia Dev. Co., No. 1 Placentia, Orange Co.	31- 3- 9	4,631	hd. sh. drilling
Mid-Rich Drlg. Co., No. 1 Atwood, Orange Co.	26- 3- 9	360	sd. sh. drilling
Rubens, Sy., No. 1 Atwood, Orange Co.	19- 3-19	3,368	suspended
Bardeen Pet., No. 1 Coyote, Orange Co.	18- 3-10	3,177	fish liner
Great American Pet., No. 1 Chino, San Bernardino Co.	18- 2- 8	2,645	suspended
Great American Pet., No. 2 Chino, San Bernardino Co	18- 2- 8	2,600	suspended
Tehama Pet., No. 1 Santa Ana Canyon, San Bernardino	33- 2- 8	1,295	cemented

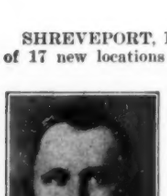
IMPORTANT NORTHERN CALIFORNIA WILDCATS

Company, well and location—	S-T-R	Depth	Status
General Pet., No. 9 Capitan, Santa Barbara Co	32- 5-30	rig	rigging up
Shell Oil Co., No. 2 Capitan, Santa Barbara Co.	32- 5-30	1,769	pump 25 B/D
Lincoln Drlg. Co., No. 3 Summerland, Santa Barbara Co.	21- 4-26	2,803	suspended
Dietzmann, J., No. 1 Summerland, Santa Barbara Co.	16- 4-26	3,666	well redrill
Fairview Oil Co., No. 1 Purisima, Santa Barbara Co.	18- 7-34	2,186	hd. sd. drilling
Barnsdall-Rio Grande, No. 8 Doty Elwood, Santa Barbara	15- 4-29	4,868	fishing D/P
Signal Oil & Gas Co., No. 2 Elwood, Santa Barbara Co.	tideland	5,112	1,500 m.c.f. gas
East Elwood Pet. Co., No. 1 Elwood, Santa Barbara Co.	14- 4-29	rig	rigging up.
Cuyama Oil Co., No. 1 Cuyama, Santa Barbara Co.	12-10-27	4,002	suspended
Union, No. 1 Santa Maria, Santa Barbara Co.	19-10-33	1,803	redrill 940
Richfield, No. 2 Rincon fee, Ventura Co.	17- 3-24	2,557	suspended
Woodrow Pet., No. 1 Rincon, Ventura Co.	4- 3-24	7,612	suspended
Continental, No. 3 San Miguelito, Ventura Co.	33- 3-24	....	building road
Hancock Oil Co., No. 1 Fiilmore, Ventura Co.	13- 4-19	3,357	cleaning out
Oil Ridge Oil Co., No. 1 Fillmore, Ventura Co.	1- 4-19	642	test W.S.O.
Chappuis, Louis, No. 1 Sespe, Ventura Co.	1- 4-20	....	location
Kneiper & Atha, No. 1 Bardsdale, Ventura Co.	7- 3-19	1,710	suspended
Williamson & Donaher, No. 1 Simi, Ventura Co.	36- 3-18	790	cleaning out
Dabney, H. R., No. 1 Simi, Ventura Co.	22- 2-18	1,505	suspended
Midlands Pet., No. 1 Ojai, Ventura Co.	9- 3-22	7,830	fishing D/P
Prop. Service Corp., No. 1 Ventura, Ventura Co.	24- 3-23	....	building road
Laing & Jacobs, No. 1 Shiells, Ventura Co.	32- 4-19	721	cleaning out
Kirk, W. A., No. 1 Sulphur Mountain, Ventura Co.	21- 4-22	1,810	br. sh. drilling
Mosher, J. W., No. 1 Santa Paula, Ventura Co.	22- 4-21	1,860	br. sh. drilling
Las Posas Pet., No. 1 Las Posas, Ventura Co.	22- 3-20	6,153	suspended
International Oil Deveopers, No. 1 Conejo, Ventura Co.	33- 2-20	3,060	hd. sd. drilling
Hub Pet. Co., No. 1 Gould Hills, Kern Co.	22-29-21	6,840	suspended
Shell Oil Co., No. 1 Gould Hills, Kern Co.	21-29-21	3,221	sd. sh. drilling
Standard Oil Co., No. 1 McKittrick, Kern Co.	15-30-22	rig	rigged up
Casa Mira Oil Co., No. 1 Belridge, Kern Co.	29-28-20	4,982	suspended
General Pet., No. 1 Belridge, Kern Co.	30-28-21	10,700	br. sh. drilling
Union Oil Co., No. 18 Belridge, Kern Co.	36-27-20	5,670	sd. sh. drilling
Wrenn, J. J., No. 1 Antelope Plain, Kern Co.	32-25-17	1,701	suspended
North American, No. 1 Jasmine, Kern Co.	25-25-27	1,876	sd. sh. drilling
Associated, No. 1 Lost Hills, Kern Co.	2-26-20	7,752	sd. sh. drilling
Inland Pacific, No. 1 Lost Hills, Kern Co.	29-25-21	1,062	sd. sh. drilling
Howells Bros., No. 1 Round Mountain, Kern Co.	32-28-29	2,143	bl. sh. drilling
Semaphore Oil Co., No. 1 McVan, Kern Co.	14-27-27	231	sd. sh. drilling
Caribou Record Oil Co., No. 1 Kern Front, Kern Co.	11-28-27	2,084	pump. 88 B/D
Shafter Oil Co., No. 1 Shafter, Kern Co.	8-28-25	2,993	sd. sh. drilling
Ohio Oil Co., No. 1 Buena Vista Lake, Kern Co.	31-31-26	6,190	sd. sh. drilling
Alta Oil Co., No. 1 Union Avenue, Kern Co.	6-30-28	6,457	cemented
Hall, C. C., No. 1 Mountain View, Kern Co.	25-30-28	rig	rigged up
Severns Drilling Co., No. 1 Mountain View, Kern Co.	24-30-28	4,901	sd. sh. drilling
Union Oil Co., No. 1 Mountain View, Kern Co.	15-30-28	5,787	suspended
Hogan Pet. Co., No. 3 Shell Mountain View, Kern Co.	29-30-29	5,804	1,445 B/D
Hogan Pet. Co., No. 3 Mountain View, Kern Co.	29-30-29	6,060	abandoning
Labadie, E. L., No. 1 Mountain View, Kern Co.	29-30-29	5,588	water witch
Standard, No. 1 Mountain View, Kern Co.	19-30-29	5,063	sd. sh. drilling
Commanche Oil Co., No. 1 Commanche, Kern Co.	15-32-29	2,363	gr. sd. drilling
Badger Oil Co., No. 1 Wheeler Ridge, Kern Co.	31-11-19	5,494	gr. sd. drilling
Russ Oil Synd., No. 1 Kingsburg, Fresno Co.	20-12-11	4,044	suspended
Bergman, Harry, No. 1 Kingsburg, Fresno Co.	12-12-11	5,141	sd. sh. drilling
Graham & Loftus, No. 1 Raisin City, Fresno Co.	20-15-18	5,906	suspended
Emerich Oil Co., No. 1 Mendota, Fresno Co.	35-13-13	4,575	suspended
Western Gulf, No. 1 S. P., Fresno Co.	15-17-15	7,893	cleaning out
Hogan Pet. Co., No. 1 Joaquin Ridge, Fresno Co.	28-20-16	6,605	suspended
Kent & McDonald, No. 1 Carrizo Plains, San Luis Obispo	3-22-22	3,830	suspended
Farrel Pet., Well No. 1, San Luis Obispo Co.	18-31-12	1,095	cleaning out
Willet Oil Co., No. 2 Cholame, San Luis Obispo Co.	10-25-15	rig	rigged up
Commonwealth Consd. Gas Co., No. 1 Tulare Lake, Kings	21-22-20	1,091	bl. sh. drilling
Tulare Basin Oil Co., No. 1 Tulare Lake, Kings Co.	2-23-19	1,200	rebuild rig
Douglas, J. M., Well No. 1, Monterey Co.	36-22- 9	2,397	br. sh. drilling
Oakdale Oil Co., No. 1 Oakdale, Stanislaus Co.	5- 2-10	4,760	hd. sh. drilling
Pacific Northern Oil Co., No. 1 Guinda, Yolo Co.	23-12- 3	6,680	hd. sd. drilling
Buttes Oilfields Co., No. 1 Marysville, Sutter Co.	35-16- 1	2,731	gas—shut in
Buttes Oilfields Co., No. 2 Marysville, Sutter Co.	35-16- 1	4,320	suspended
Milham Exploration Co., No. 1 Tracy, San Joaquin Co.	5- 4- 5	2,415	hd. sd. drilling
Orland Oil Synd., No. 1 Orland, Tehama Co.	31-23- 3	3,790	suspended
Mid-Valley Oil Co., No. 1 Orland, Tehama Co.	14-24- 3	....	material
Tehama Pet., No. 1 Murdock, Glenn Co.	10-22- 5	100	suspended

Seventeen New Locations Staked in Mississippi and Louisiana Fields Indicate Drilling Activity

By J. R. CRUMPTON
Staff Correspondent, Louisiana-Arkansas

SHREVEPORT, La., Apr. 2.—A total of 17 new locations were staked in this division during the last week, reflecting activity in all of the districts except in Arkansas, which is experiencing a lull in drilling, particularly in wildcat areas.



In Bossier Parish, Ford & Hanover have derrick up on their No. 1 Cryer in Section 25-19-12, with a good block of acreage surrounding it. This area had a test about a year ago, drilled only to about 1,100 feet with no test made. In the same parish, C. B. Duffield is rigging up on his No. 2 Werner, Section 11-18-13, about 1,100 feet northeast of a dry hole recently completed by the same operators at 3,529 feet. A wildcat test of much interest will be the Triangle Drilling Co.'s No. 1 W. A. Colvin, Section 31-20-3w, in Lincoln Parish. This test is about 4 miles southwest of the town of Dubach and about 1 mile south of a test drilled over a year ago by Benedum & Trees to a total depth of 4,300 feet. The latter well cored a good body of sand in the upper Trinity that carried no oil. There is a good surface structure in that area, which is about 10 miles east of the Sugar Creek Field in Claiborne Parish. The United Gas Public Service Co. has made location for another well in the Rodessa Field in the northwestern part of Caddo Parish. It is termed its No. 1 Sallie Dees unit in Section 28-23-16. Near the town of Simmsboro in Lincoln Parish, J. P. Evans has assembled a block of 6,000 acres with a contract to start a 3,500-foot test by July 1 of this year. Seven other new operations were reported in North Louisiana, all of them in the Converse and Zwolle Fields.

Eight Completions in North Louisiana

The North Louisiana district had a total of eight completions consisting of six oils wells and two dry holes. The shallow Converse Field led with a total of four producers, Earl Halliburton's No. 1 Barr, Section 15-9-13, is flowing 175 bbls. of pipe line oil from a total depth of 1,960 feet. This is the second good well for this operator in as many weeks. The Helena Oil & Gas Co.'s No. 1 Burkett, Section, Section 16-9-13, is a 15-bbl. pumper from 1,999 feet, and Walter R. Smith's No. 1 Rheta Williams, Section 9-9-13, is pumping 65 bbls. from 1,975 feet. Martin L. Stephens' No. 1 A. J. Burkett, Section 10-9-13, had a gas blowout with oil at 1,828 feet after setting casing at 1,435 feet. The well was killed and completed at 1,952 feet, flowing 50 bbls. daily.

The East Zwolle Field furnished two good producers and one dry hole. The Monroe Production Co.'s No. 3 Sabine Lumber Co., Section 7-7-11, is flowing 500 bbls. daily from 2,437 feet, but the gusher evidently hit the same crevice in the chalk as a previous producer and killed the flow of the latter. The Pelican Natural Gas Co.'s No. 28 Louisiana Long Leaf Lumber Co., Section 29-8-11, was dry at 2,506 feet, but after treating with acid, was completed at this depth, pumping 175 bbls. The dry hole in this area was Ben F. Smith's No. 2 Williams, Section 32-8-11. It was abandoned at 2,580 feet.

In Webster Parish, northeast of the Cotton Valley Field, the Dorcheat Syndicate's No. 1 A. J. J. Hodges, Section 25-22-10, was dry and abandoned in red beds at 3,419 feet. This is the third test of this same company between the producing area of Cotton Valley and the gas field in the Shongaloo district to the northeast, and it is understood that the recently completed test checked lower by more than 100 feet than its Pardee well, drilled about six months ago.

Wildcat Tests Yield Little

The few wildcats in the North Louisiana area that were tested during the past week either had barren results or experienced trouble with testing tools that called for fishing jobs. In the southern part of Caddo Parish, A. D. King, trustee's No. 1 Sallie H. Roach, Section 4-14-16, is a junked hole at 1,541 feet. One joint of the 8-inch casing was evidently disconnected during the process of drilling the plug and dropped to the bottom of the hole. This is thought to be the reason for no show of oil when tested after a good show appeared on the ditch and pit from the chalk. The derrick has been skidded 35 feet north of the old hole to drill to the same depth for another test. The wildcat was started for a 4,000-foot test, but the show in the chalk appeared with the above results.

R. W. Norton's No. 1-B French, Section 34-23-16, a deep test for oil in the Rodessa-Glen Rose gas area in the northwestern part of Caddo Parish, set a short string of casing to test a sand at 6,717 feet. In the process of setting, the liner was cemented into the casing and the crew is now salvaging all of the line that is possible, most of which has been recovered. The remainder may be milled out or sidetracked. The Bossier Oil & Gas Co.'s No. 1 Sherrill, Section 13-9-12, Bossier Parish, tested dry on drill stem test at 2,070 feet and is coring at 2,175 feet. The test is in the immediate vicinity of a previous well drilled by the same operators that made an estimated 1,000,000 feet of gas and considerable salt water. None of the other wildcats developed anything of interest during the past week.

In Bossier Parish, Jensen-Mixon & Gutzler's No. 1 Ledbetter, Section 6-18-11, is coring gummy shale at 2,534 feet, and McKinney & Stewart's No. 1 Nattin, Section 22-22-14, is arranging to test at 2,665 feet. The latter well is west of Plain Dealing in the immediate vicinity of a well drilled several years ago which pumped and flowed by heads about 10 bbls. of 30 gravity oil from the 3,000-foot level. In the same parish, the Producers Oil & Gas Co., Section 7-17-11, northeast of the Sligo gas field, has set 12-inch surface casing at 880 feet and is drilling ahead. In De Soto Parish, Dempsey & Manziel's No. 1 Thigpen, Section 33-13-13, has set 12½-inch surface casing at 100 feet and is drilling at 250 feet. This test, north of the town of Mansfield, is located on an 8,000-acre block. Bailey Gaunce's second well in the old Naborton Field, No. 2 Jenkins, Section 35-13-12, is drilling at 989 feet after settling 15½-inch casing at 20 feet. The first well of this operator, drilled below the previous producing pay sand of this field, was completed as a 6,000,000-foot gas well after experiencing much trouble with the casing seat. The well originally gauged 12,146,000 feet of gas before 5⅛-inch casing collapsed.

MISSISSIPPI

The Mississippi district reported three new locations, two in the Jackson area and one wildcat in the southern part of the State. In Hinds County, J. C. Satterfield, trustee, has staked location for his No. 1 Love Petroleum Co. in Section 1-5n-1e, and Atkins & Hightower's No. 1 C. G. Sanders, Section 30-6n-2e, is a derrick. In the southern part of the State, in Marion County, the Pelican Oil & Gasoline Co. has a derrick up for its No. 1 Pinelands, Inc., in Section 22-3n-17w.

Drilling operations in this State have decreased gradually during the past six months, but much geophysical and geological work is being carried on, and it is expected that wildcatting on a large scale will be in progress before the end of the year. In Greene County the United Gas Public Service Co. is drilling a deep test on a block of approximately 30,000 acres. Its No. 1 Davis, Section 30-1n-5w, is drilling in sandy shale at 4,850 feet. In the Hinds County area, Alexander & Weaver's No. 1 L. L. Mayes, Section 25-6n-1e, has set 8-inch casing at 2,414 feet. South of gas production of the Jackson Field in Rankin County, Benedum & Trees is drilling two tests to the lower horizons. Its No. 1 Ascher, Section 35-3n-1e, is drilling in black shale at 5,265 feet, and No. 1 Southern Development Co., in the same section, is drilling in sand and pyrites at 4,750 feet. The only other wildcat in Mississippi of interest at present is the Orbit Drilling Co.'s No. 1 Parker, Section 14-14-1e, Warren County. A likely looking sand has been cored at 3,130 feet and 7-inch casing has been set to test.

Daily Average Runs

The North Louisiana fields declined 435 bbls. in daily runs during the past week and the Arkansas district showed a net increase of only 80 bbls. to make a decrease of the combined fields of 355 bbls. The daily average runs from the several pools were:

NORTH LOUISIANA

Caddo, light	4,590
Caddo, heavy	1,615
Converse	1,425
Cotton Valley	560
De Soto and Red River	1,475
Elm Grove	350
Haynesville	3,750
Holly	190
Homer	2,600
Pleasant Hill	215
Sarepta-Carterville	840
Urania	2,950
Zwolle	7,055
Total North Louisiana	27,615
Total previous week	28,050
Decrease	435

ARKANSAS

Champagnolle	1,195
El Dorado	2,420
Lisbon	400
Miller County	985
Nevada	820
Smackover, light	2,475
Smackover, heavy	19,840
Stephens	655
Urbana	2,240
Total Arkansas	31,040
Total previous week	30,960
Increase	80
Total both States	58,655
Total previous week	59,010
Decrease	355

Wildcat Operations in Louisiana-Arkansas

(Rotary operations unless otherwise designated)

North Louisiana

AVOYELLES PARISH

Haas & Stokes' No. 1 Lindstrum Land Co., 690 ft. S, 980 ft. E, NW cor. Sec. 34-1n-6e ..... Set 12-in. 40 ft.

BOSSIER PARISH

Bossier O. & G. Co.'s No. 1 Sherrill, 300 ft. S and W, NE cor. Sec. 13-9-12 ..... Tested dry 2,070 ft; drlg. 2,175 ft.
C. B. Duffield's No. 2 Werner, Sec. 11-18-13..... Rigging up.
McKinney & Stewart's No. 1 Nattin, 470 ft. W, 620 ft. S, NE cor. Sec. 22-22-14 ..... S.D. 2,665 ft.
Producers O. & G. Co.'s No. 1 Werner, 660 ft. N and W, SE cor. Sec. 7-17-11 ..... Drlg. 100 ft.
C. E. Reid, tr.'s No. 1 Doty, 730 ft. S, 618 ft. W, NE SE Sec. 7-16-11 ..... Well killed and S.D. 3,020 ft.

CADDO PARISH

Ark.-La. P. L. Co.'s No. 1 Rodessa Land Co., 1,290 ft. N, 645 ft. W, SE cor. Sec. 23-23-16 ..... Rigging up.
W. O. Bliss' No. 1 McDade, 330 ft. N and E, SW cor. NW NW Sec. 2-20-15 ..... Used acid; W.O.S.R. 1,640 ft.
Burkett O. & G. Co.'s No. 1 Lindholm, 400 ft. S and E, NW cor. NE SE Sec. 15-17-14 ..... S.D. 750 ft.

CALDWELL PARISH

Terrell & Price's No. 1 La. Central Lbr. Co., 300 ft. N, 200 ft. W, SE cor. NW NE Sec. 18-11-3e ..... Fishing for D.S. 2,080 ft.

CATAHOULA PARISH

T. R. Hincey's No. 1 Millsaps, Sec. 32-9-6e ..... Rigging up.

DE SOTO PARISH

Bailey Gaunce's No. 2 Jenkins, 330 ft. N and W, SE cor. SW SW Sec. 35-13-12 ..... Drlg. 989 ft.
Berry Oil Co.'s No. 1 Wemple, Sec. 14-12-11..... Set 10-in. 100 ft.
Dempsey & Manziel's No. 1 Thigpen, 375 ft. S, 330 ft. W, NE cor. SW NE Sec. 33-13-13 ..... Set 12½-in. 100 ft.
Geo. M. LeGrand's No. 1 Faris, 330 ft. S and W, NE, cor. SE Sec. 19-11-15 ..... Setting 4½-in. 2,465 ft.

LINCOLN PARISH

Triangle Drlg. Co.'s No. 1 Colvin, 660 ft. E of C Sec. 31-20-3w ..... Location.

MOREHOUSE PARISH

Zeiger & Bacon's No. 1 Crossett, 400 ft. N, 300 ft. W, SE cor. Sec. 41-23-6e ..... S.D. 2,155 ft.

RED RIVER PARISH

A. D. Mytiler's No. 1 La. Delta Pecan Co., 1,700 ft. N, 160 ft. E, SW cor. Sec. 27-13-11 ..... Set 10-in. 40 ft.; drlg. 80 ft.

SABINE PARISH

J. F. Anderson's No. 1 Burkett, 135 ft. N, 655 ft. E, SW cor. NW Sec. 10-9-13 ..... S.D. 1,921 ft.
J. W. Bettis et al's No. 1 Frost Lbr. Ind., 330 ft. S and W, NE cor. SW Sec. 15-9-13 ..... Rigging up.
R. B. Campbell et al's No. 1 Cook Land Co., 150 ft. N, 300 ft. W, SE cor. NW NW Sec. 35-10-12 ..... Drlg. 1,380 ft.
Cleary Brothers' No. 2 Harris, 100 ft. N and E, SW cor. Lot 21, Sec. 10-8-13 ..... W.O.S.R. 1,997 ft.
A. G. Craig's No. 1 Belton, 330 ft. N and E, SW cor. NW NW Sec. 33-9-13 ..... Abd. 1,150 ft.

(Continued on Page 94)

Nine Completions in the Central West; One Small Producer in Lima Field

By GEORGE A. WHITNEY
Staff Correspondent, Central West Fields

FINDLAY, Ohio, Apr. 2.—The only completion in the Lima Field of northwestern Ohio during the week was the Ohio Oil Co.'s test in the northeast corner of Burton Sanderson farm, SW Section 30, Jackson Township, Van Wert County, with an initial of 15 bbls. at a total depth of 1,292 feet. Branigan and others are drilling on the J. H. Weldy farm, same township. Jackson Oil Co. is drilling on the W. F. Pangle farm, Section 29, and Elmer Caudill is drilling on the Daniel Steman farm, Section 30, same township.

In Wyandot County no completions were reported, but Upper Sandusky Oil & Gas Co. is drilling No. 5 N. H. Saltzman farm, Section 28, Crane Township. Jones & Coyle are nearing the Trenton lime formation in No. 1 on the Harry Bardon farm, and drilling in the Trenton at 1,457 feet in No. 1 on the Edith Sweline farm, Section 21, Tymochtee Township. U. & M. Gas Co. is drilling below 1,100 feet on the Dewey M. Failor farm, Section 21, Crane Township. Wyandot Oil Co. is drilling below 400 feet on the Edward Reister farm, Section 34, Crawford Township. McPheron and others are shut down at 800 feet on the Catherine Smalley farm, Section 3, same township.

Four wells are under way in Seneca County. In Liberty Township, R. E. Greene is drilling No. 3 on the T. C. and B. G. Shaull farm, Section 30, and J. M. Murphy is drilling on the Andrew Kimmitt farm, Section 20, while in Hopewell Township, J. L. Barrett is still drilling on the T. N. Einsel farm, Section 1, and Horton & Barnard are drilling on the A. D. and M. M. Dondore farm, Section 4.

In Wood County, but two wells are drilling, Mary V. Conden's test on the C. E. Mercer farm, Section 14, Liberty Township, and Wilber P. Hoople and others' No. 6 on the Mary Reitzel farm, Section 23, Perrysburg Township.

A test is being drilled by C. Wentzer on his own farm, Section 28, Douchoquet Township, Auglaize County, and N. E. Masters and others are drilling No. 2 on the George Ruble farm, Section 11, Noble Township.

CENTRAL OHIO

Nine completions were reported from the Central Ohio Field, there being one oil producer, one dry hole and seven gas wells. There are a large number of wells under way, along with many locations.

In Huron County, J. E. Ringler's test on the William and Nina Stewart farm, Section 24, Fitchville Township, is a gas well at 360 feet. In the Cleveland Field, Hulse and others' test on the Emma James farm, Section 28, Olmstead Township, Cuyahoga County, was dry at 2,559 feet.

In Stark County, Ohio Fuel Gas Co.'s No. 1 on the Therman Bechtell farm, Section 8, Jackson Township, is a gas well at 4,206 feet. East Ohio Gas Co.'s No. 2 on the Charles Pontius farm, Section 16, Plain Township, is a gas well at 4,547 feet. White and others' No. 1 on the K. Emil Kiesling farm, Section 18, same township, is a gas well in the Clinton lime at 4,570 feet. East Ohio Gas Co. made a location on the William Green farm, Section 20, same township. H. W. Hoover is drilling on the M. D. Shanks farm, Section 20, same township. East Ohio Gas Co. is drilling No. 1 on the John Fasnacht farm, Section 10, same township. Lyons and others are drilling No. 2 on the William and Anna Barr farm, Section 27, same township.

In Licking County, Blue Rock Oil Co.'s test on the Walter Hoyt farm, Section 17, produced an initial of 6 bbls. at a depth of 696 feet.

In Guernsey County, Ohio Fuel Gas Co.'s No. 2-5,789, on the John Johnson farm, Section 20, Willis Township, is a gas well at a depth of 1,571 feet.

Brooks Johnson is drilling on the B. W. Eddy farm, Section 7, Chester Township, Geauga County. Wittmer Oil & Gas Co. is drilling on the Violet M. Wise farm, Section 26, Lawrence Township, Stark County. Goddard & Blosser are drilling deeper No. 3 on the W. E. Henthorn farm, Section 17, Berne Township, Athens County. Hopewell Oil & Gas Co. is drilling No. 2 on the W. L. Helriggle farm, Section 9, Brush Creek Township, Muskingum County.

In Coshocton County, Preston Oil Co. is drilling No. 4-1,541 on the F. H. Donaker farm, Sections 16-17, Perry Township, below 2,800 feet. Same company made three new locations in the Three-quarters Section of Newcastle Township: No. 1 Bertha E. Barrett farm, No. 2 A. J. and B. W. Beatty farm and No. 3 D. S. Snyder farm.

Atha Oil & Gas Co. is drilling on the Lyman H. Osborne farm, Section 2, Wayne Township, Muskingum County. In Lorain County, Wittmer Oil & Gas Co. has a rig on the Thomas Gammon farm, Lot 97, Grafton Township. McMillan and others are drilling below 1,400 feet on the Merle Penfound farm, Lot 9, Carlisle Township, same county. E. R. Edson is drilling below 2,200 feet on the Suburban Realty Co. property, Lot 13, Sheffield Township, same county.

Wiser Oil Co. is going to plug its No. 2 on the Dayton A. Doyle farm, Section 5, Springfield Township, Summitt County, which was drilled to a total depth of 3,620 feet.

In Meigs County, D. A. Thomas and others' test on the Maud Buffington Thomas farm, Section 6, Rutland Township, is a gas well at 905 feet. Barton & Utsinger have a rig in ready to start drilling on the Donald D. Bryan farm, Section 8, same township. Bailey and others have a gas well in the Maxon sand at 905 feet on the Charles L. Bobo farm, Section 12, Columbia Township, same county. A. N. Bengel is shut down at 1,450 feet on the Ida M. Heacock farm, Section 24, Salen Township, same county. Starr Mills Co. is having casing trouble in No. 2 on the Rena E. Karr farm, Section 11, Sutton Township, same county. In Lebanon Township, same county, John Mayer and others are drilling below 150 feet on the Abner Price farm, Section 8. O. D. Jones is drilling below 100 feet in No. 2 on the W. E. McDade farm, Section 13, and Joe Rubin is drilling No. 1 on the Mattie C. Henderson farm, same section.

In Ashland County, Robinson and others are drilling No. 7 on the W. S. Wolf farm, Section 16, Lake Township.

INDIANA

Indiana is rather quiet, due to a large extent to weather conditions. In Knox County, O. A. Thayer's No. 1 on the Burton Yates farm, NE NW Section 8, Busseron Township, Knox County, was dry at 820 feet.

Ohio Oil Co. abandoned No. 1 on the J. P. Gladish farm, NW Section 30, Madison Township, Pike County. Charles L. Divers has been delayed by a fishing job at 1,360 feet on No. 3 on the Glendora Robling farm, Section 14, Logan Township, same county.

In Sullivan County, Charles W. Whitlock and others are delayed by a fishing job at 1,300 feet on the W. M. Medsker farm, Section 23, Turman Township, and Pierce, Yeager and others' No. 1 on the Ellery D. Hayden farm, Section 10, same township, is at 900 feet. H. J. Siner is drilling on the H. E. Williams farm, SE Section 18, Hamilton Township, same county.

ILLINOIS

In Fayette County, Big Four Oil & Gas Co. drilled a dry hole on the William Albert farm, Section 29, Kashaskia Township, at a total depth of 1,841 feet.

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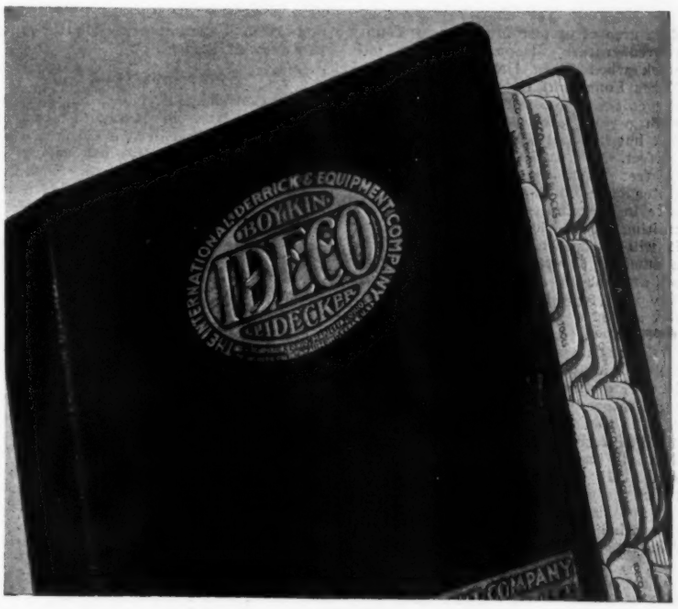

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Splendora Test Shows Salt Water at 6,050 Feet; Cleveland Test May Be Drilled to the Sparta

By A. C. EASTERWOOD
Gulf Coast Bureau, The Oil and Gas Journal

HOUSTON, Tex., Apr. 2.—The Splendora area of eastern Montgomery County proved rather disappointing the past week when Steen Drilling Co.'s No. 1 Texas Long Leaf tested salt water after deepening to 6,050 feet. It cored sand with a good odor of oil from 6,039-45 feet but had salt water sand from 6,045-50 feet. On a drill stem test from 6,016-53 feet it showed 23 thribbles of salt water after building up 250 pounds pressure in 11 minutes. It is now standing, waiting the decision of operators whether it will be deepened or plugged back to a sand in the top of the Cockfield for an attempt to make a producer there. The well topped the Cockfield at 5,815 feet and in a sand at 5,855-77 feet made a drill stem test in which a pressure of 350 pounds was build up in three and one-half minutes and in which 2½ gallons of distillate and 2 gallons of mud were recovered. It was then cored deeper and the second drill stem test from 5,873-84 feet showed one joint of brown distillate and built up 575 pounds pressure in 15 minutes. The latter test was taken through one-quarter inch choke on top and three-eighths inch choke on bottom. Finding salt water in the sand at 6,045-50 feet by no means condemns the area as it is the general belief this may be an edge well. The shows of oil in both the upper Cockfield and the lower sand have established fairly definitely the existence of a field of some consequence.

Cleveland

Of great importance is the test of Gulf Production Co.'s No. 2 Kirby, south of the discovery well at Cleveland, in northwestern Liberty County, which is to be drilled to the Sparta. If this well is carried to the Sparta it will be the first test to encounter this horizon on the Gulf Coast. However, the Clay Creek Dome in Washington County has wells through the Sparta and to the Wilcox, but is so far from the coast it is considered more of an inland dome. Gulf's well is now in the Cook Mountain topped at approximately 7,004 feet actual or minus 6,863 feet and late in the week was drilling 7,494 feet in shale. Gulf Production Co.'s No. 4-C Kirby, southwest of the discovery well, and in the direction of Brown & Wheeler's No. 1 Goldberg dry hole, was rigging up.

Denton and Akin's No. 1 B. E. Quinn, about 7½ miles northeast of the Cleveland area, was abandoned as dry with total depth of 5,626 feet. On a six-minute drill stem test from 5,477-5,561 feet it showed 3 thribbles of mud with no pressure through one-quarter inch choke on top and bottom. Top of the Hockley was encountered at 4,640 feet actual or 4,471 feet subsea.

Van Vleck Prospect

On the Van Vleck geophysical prospect in Matagorda County, Skelly Oil Co.'s No. 1 Cobb created additional interest the past week when on a three-hour test it made 5 bbls. of 57 gravity brown distillate per hour, or an average of 120 bbls. daily with 7,800,000 feet of gas. Pressure on both tubing and casing was 2,575 pounds. It is now shut in with total depth of 7,076 feet after plugging back from 7,178 feet. Operators set 23 feet of blank and shoe, 31 feet of screen, and 15 feet of packer on bottom of tubing. This area was shot in July, 1933, by the Independent Exploration Co. by reflection dip shooting at which time Skelly Oil Co. acquired three-quarters interest in 7,400 acres and one-half interest in 2,000 acres of royalty. The area is on the line between Pledger and Buckeye and similar to the high pressure gas wells at Pledger.

Sheppards Mott

Oils Consolidated's No. 2 Hawkins at Sheppards Mott in Matagorda County had a stuck drill stem at 5,516 feet. This test set a string of 9⅝-inch casing at 5,358 feet in an effort to overcome the heaving shales encountered in this area, through which no wells have ever drilled. At Buckeye, United North & South Development Co.'s No. 1 Unit 6, was coring below 8,360 feet redrilling hole. Total depth was 9,257 feet before the hole heaved around 6,700 feet.

Fort Bend County

Much of the interest on the Gulf Coast during the past week has been turned to Fort Bend County. Phillips Petroleum Co.'s No. 1 A. E. Holmes, wildcat test about 7 miles northeast of Richmond, topped the Discorbis at 3,626 feet and had top of the Heterostegina at 3,710 feet actual or 3,606 feet subsea, which is considered high. It topped the Frio somewhere around 3,900 feet and late in the week was drilling 5,180 feet in shale, and is probably in the Vicksburg. About 4 miles west of Orchard, O'Connor Dome Oil Co.'s No. 1 Grigor was shut down with total depth of 5,166 feet. It had 40 feet of sand, top of which was drilled at 5,123 feet, showing water. Another test is scheduled to be drilled in the area, and it is believed if the well is higher up on the dome it will find production.

The east side of the Thompson Field in Fort Bend County was probably defined during the week by the abandonment of Humble Oil & Refining Co.'s No. 10-A George. This test, at the east edge of the south end of the field bottomed hole at 5,340 feet and was abandoned as dry. This test being a failure caused Humble to abandon its No. 11-A George, a location 741 feet southeast of No. 10-A.

Tomball Area

The Tomball area in Harris County was extended approximately one-half mile northeast by the completion of Humble Oil & Refining Co.'s No. 1 E. E. Weaver. The well came in flowing at the rate of 7 bbls. per hour through one-quarter inch choke with total depth of 5,565 feet. It topped sand at 5,541 feet actual or 5,361 feet subsea. It is 300 feet south and 473 feet east of the Weaver 22.94-acre tract in the C. N. Pillot Survey. Texas Co.'s No. 1 Sam Lewis, also in the C. N. Pillot Survey, was completed flowing at the rate of 136 bbls. in 11½ hours through 18/64-inch choke with total depth of 5,549 feet. Tubing pressure was 1,650 pounds and casing pressure 2,050 pounds.

Refugio County

In Refugio County Dash & Blanco's No. 1-C J. M. O'Brien, 1,000 feet west of nearest production in the Greta Pool, topped the Greta sand at 4,386 feet and set casing at 4,387 feet without taking a drill stem test. It cored to 4,395 feet and is now waiting cement to set. Possibilities of production are said to be good. United Production Co. has staked location for No. 14 Fox, one location south of the above well.

Austin County

Humble Oil & Refining Co. is reported to have two shooting crews making a geophysical survey of the Mill Creek area in northwest Austin County. Gem Oil Co. and Johnson Brothers' No. 1 Haedge in Block 18 of the San Felipe de Austin Survey has completed derrick.

Coleto Creek

In the Coleto Creek area of Victoria County two gas wells have recently started making oil. Houston Oil Co.'s No. 1 Maurer, completed last November at 4,456 feet for a gas well, has started making oil and recently increased its production, necessitating the erection of additional storage. Houston & Shell Petroleum Corp.'s No. 1 Victor Urban, recently completed at 2,174 feet, is also said to be making an increased amount of distillate.

Brazoria County

At the north end of the Manvel Field in Brazoria County the Texas Co.'s No. 4 Ewing was reaming with total depth of 5,662 feet. It cored hard sand with an odor of oil from 5,613-28 feet, had sand with no show from 5,640-42 feet, and sand showing oil from 5,655-57 feet.

Three tests are now being drilled in the Pledger district of Brazoria County. Danciger Oil & Refining Co.'s No. 3-A Hunt, in the W. C. Carson Survey, was drilling below 2,515 feet. Same company's No. 1-B Hunt, also in the W. C. Carson Survey, was drilling below 1,010 feet. South of the field, Danciger's No. 1 Stark-Brown in the Perry & Austin Survey has spudded and late in the week was drilling below 900 feet.

The south limits of production on the Manvel Dome in Brazoria County probably was defined during the week by the completion of Harrison & Abercrombie's No. 1 Howe. This test, on the south flank of the dome, was abandoned as dry with total depth of 7,003 feet in shale.

Newton County

In Newton County, Tide Water Oil Co. is preparing to spud No. 1 Southwest Lumber Co., northwest of Bleakwood and near the Jasper and Newton County lines. This test, on the Conroe trend, which has been getting an active lease play, will be watched with much interest.

Polk County

Of interest in Polk County is the test of Alpha Petroleum Co.'s No. 1 Kirby & West, in the southeast corner of 150-acre lease in the Thomas Survey. It drilled 14 feet of sand showing oil and bottomed hole at 4,907 feet. The 7-inch casing has been cemented at 4,891 feet and late in the week was waiting on cement to set. Top of the Cockfield was encountered 4,770 feet actual or 4,701 feet subsea. In the Livingston Field, Smith & McDaniel's No. 1 W. B. Munson, in the A. Viesca Survey, was flowing into pits but no gauge had been made. It bottomed hole at 4,337 feet and set 7-inch casing at 4,285 feet.

Reading & Bates' No. 2 Davis Holmes, west of Schwab's gasser, came in during the week for 16 bbls. per hour through one-quarter inch choke with total depth of 4,333 feet. It showed 625 pounds tubing pressure and 675 pounds casing pressure. The 2½-inch tubing was set at 4,327 feet.

Wharton County

At Louise, in Wharton County, Pure Oil Co. was preparing to deepen No. 1 W. Garrett. This test was recently abandoned at 6,343 feet. Same company's No. 1 Wallace Houston was drilling at 6,165 feet in sandy shale, while No. 2 Stewart was drilling below 6,155 feet in sandy shale.

Sour Lake

On the west edge of the Sour Lake Field in Hardin County, Parr and others' No. 1 Benard was waiting on cement to set with total depth of 6,944 feet. It had sand with a show of oil and gas from 6,936-44 feet which may prove a new producing sand for the area. Deepest production at present at Sour Lake is around 4,300 feet.

Bammel Prospect

On the Bammel prospect north of Houston, Harris County, American Liberty Oil Co.'s No. 1 Clappert topped the Operculina at 6,230 feet and late in the week was coring ahead below 6,230 feet. It encountered top of the Hockley at 5,375 feet actual or 5,258 feet subsea. According to some company geologists the well is running high and possibilities for production are somewhat brighter.

Liberty County

Miramar Oil Corp.'s No. 1 Crowe & Jacobs, in the H.&T.C. Survey No. 21, of Liberty County, was drilling below 4,765 feet in shale. Before deepening, this test came in swabbing at the rate of 200

Gulf Coast Fields and Wildcats

Week Ending March 31

DAMON MOUND—BRAZORIA COUNTY

Company, farm and location—	Remarks:
Intercoastal Oil Co.'s No. 11 Wisdom, 350 ft. E of No. 6, Blk. 51, Lot D, A. Darst Sur.	T.D. 2,652 ft.; flowed 190 bbls. fluid, 50% water; packer stuck 32 ft. off bottom; milling.

MANVEL—BRAZORIA COUNTY

Burton Drlg. Co.'s No. 1 Parker, 40 ft. E and 70 ft. S of SW cor. of Lot No. 28, H.T.&B. Sur. No. 63	Drlg. gumbo 785 ft.
Texas Co.'s No. 9-B Belcher, 2,691 ft. N 42 deg. E from S cor. H. N. Little Sur., and 330 ft. NW at R/A from survey line	Drlg. sand 3,822 ft.
Texas Co.'s No. 1 Boff, 365 ft. from S and 326 ft. from W line of C of Lot 24, H.T.&B. Sur. No. 74	Drlg. sand and boulders 269 ft.
Texas Co.'s No. 1 Cascio, 200 ft. E of Scopel lease and 330 ft. at right angles SW of Belcher "B" lease	Derrick.
Texas Co.'s No. 4 O. F. Ewing, 415 ft. from NW line, Lot 8, and 787.2 ft. from NE line, H. N. Little Sur.	T.D. 5,850 ft.; sidetracking at 4,025 ft.
Texas Co.'s No. 2 Scopal, 200 ft. N and 200 ft. W from SE cor. of lease	Location.
Turnbull & Irwin's No. 1 Marachini, 300 ft. from NE line and C of E and W lines of 5-acre tract in C. O'Donnell Sur. No. 493	Drlg. shale 4,500 ft.

STRATTON RIDGE—BRAZORIA COUNTY

Amerada Pet. Corp.'s No. 5 Seaborn, Austin-Williams Sur., 600 ft. E of No. 3 and 329 ft. S at R/A	Drlg. lime 6,338 ft.

WEST COLUMBIA—BRAZORIA COUNTY

Miramar Oil Corp.'s No. 1 Hogg, Martin Varner league (second hole), 75 ft. N of first hole	Drlg. sandy shale 5,110 ft.

(Continued on Page 89)

bbls. daily of 26 gravity oil but sanded up. The Jackson sand at Hull in Liberty County marked up four producers during the week. Gulf Production Co.'s No. 96 Phoenix was completed for 62 bbls. in six hours through quarter-inch choke at 4,220 feet. Houston Oil Co.'s No. 5 Orgain bottomed hole at 4,994 feet and made 900 bbls. daily. Miramar Oil Corp.'s No. 9-A Phoenix was completed for 100 bbls. in 17 hours through a quarter-inch choke at 4,652 feet. Texas Co.'s No. 6 Barrow fee bottomed hole at 4,662 feet and made 255 bbls. of oil with 2 per cent b.s. in 15 hours through half-inch choke. Tubing pressure was 150 pounds and casing pressure 375 pounds.

At Esperson, in Liberty County, General Crude's No. 11 Moores Bluff caught fire the first part of the week, destroying the 122-foot derrick. Kinley Brothers of Oklahoma were summoned but before they had time to shoot out the fire the well sanded up and extinguished itself. The well was being recompleted in 30 feet of sand from 3,570-3,600 feet after plugging back from the deeper pay horizon. On a drill stem test it showed 500 pounds pressure in five minutes.

Greta Field

The Greta Field in Refugio County marked up its third completion for the 3,500-foot pay horizon during the week. United Production Co.'s No. 2-A Lambert on the extreme east edge of the field, was completed for 10 bbls. per hour through three-sixteenths inch choke with total depth at 3,520 feet. Tubing pressure was 250 pounds and casing pressure 360 pounds. North of production Humble Oil & Refining Co.'s No. 1 Welder missed both 4,400-foot pay and the 5,900-foot horizon, marking the north limits of the field. It was abandoned as dry with total depth of 6,474 feet.

Conroe Field

At Conroe, in Montgomery County, American Liberty Oil Co.'s No. 1-D Harris, in the J. A. Davis Survey, at the northeast end of the field, was completed for 2 bbls. of distillate per hour through a five-eighths inch choke. Total depth is 5,168 feet. One-quarter mile east of production, Pine Tree Oil Co.'s No. 1 South Texas Development Co., was abandoned with total depth of 5,182 feet.

SOUTH LOUISIANA

At Sorrento, in Ascension Parish, Union Sulphur Co. abandoned two wells during the week. No. 2 Lacy White Fraink was abandoned with total depth of 6,520 feet in salt. No. 25 United Land bottomed hole at 6,110 feet in salt and was abandoned as dry.

A new producing horizon has been opened on the east flank of the Hackberry Dome in Cameron Parish by Texas Co.'s No. 11-B State. It had sandy lime from 6,078-92 feet and came in flowing at the rate of 600 bbls. fluid daily, 80 per cent of which was salt water. At latest report it was flowing around 37 bbls. of 45 gravity oil per hour through a quarter-inch choke, with very little water. Tubing pressure was 750 pounds and casing pressure 1,000 pounds.

In southwestern Beauregard Parish, Richardson Brothers of Fort Worth are preparing to move in material for a 5,000-foot test on the Conroe trend and located in Section 34-4s-12w. Operators have a block of approximately 4,000 acres around the location. In the Dry Creek area Humble Oil & Refining Co.'s No. 1 Long Bell was drilling below 7,040 feet in shale.

In the Gillis area in Calcasieu Parish, Union Sulphur Co.'s No. 1 Barbe estate was drilling at 8,125 feet in hard shale. In the west extension area of the Lockport Field, Union Sulphur Co.'s No. 1 Farquahar was shut down after testing salt water at 7,468 feet.

Union Sulphur Co.'s No. 1 Barbe estate, in the East Hackberry Field of Cameron Parish, was drilling at 7,945 feet in shale. This well was formerly completed at 7,598 feet, flowing at the rate of 510 bbls. per day through three-eighths inch choke, but later stopped flowing and went to salt water.

In Jefferson Davis Parish at Roanoke, Humble Oil & Refining Co.'s No. 2 DeVilbiss is pulling tubing to plug back for another test. Total depth is now 7,700 feet. All of the tests so far have shown salt water.

Official Invitations for the Houston Show Sent Abroad

A presidential invitation to attend the Oil Equipment and Engineering Exposition to be held in Houston, Tex., April 16-21, has been authorized by Congress for extension to foreign countries as well as to the states of the Union.

The exposition management has already been advised of representation that will be made by several foreign countries. Several directors have been appointed from oil companies located abroad. Many of the foreign visitors are also in the United States at the present time and have expressed their intention of conducting tours of inspection in the Gulf Coast and other Texas fields during the time that the Houston oil show is in progress. This will enable them to make a thorough study of the tools and machinery that can be adapted in their operation as well as giving them a chance to see the various types of equipment in actual operation in the many fields within a short radius of the exposition.

DIRECTORS ELECTED

Walter L. McClanahan, of Mount Pleasant, Mich., president of the McClanahan Oil Co., has announced the election of seven directors of the company as follows: Esbern Hanson and John Bruun, Grayling, Mich.; William H. Hoehn, Grant L. Cook and Robert J. Wagner of Detroit; Frank Royce of Ann Arbor and E. G. Chapman, Mount Pleasant.

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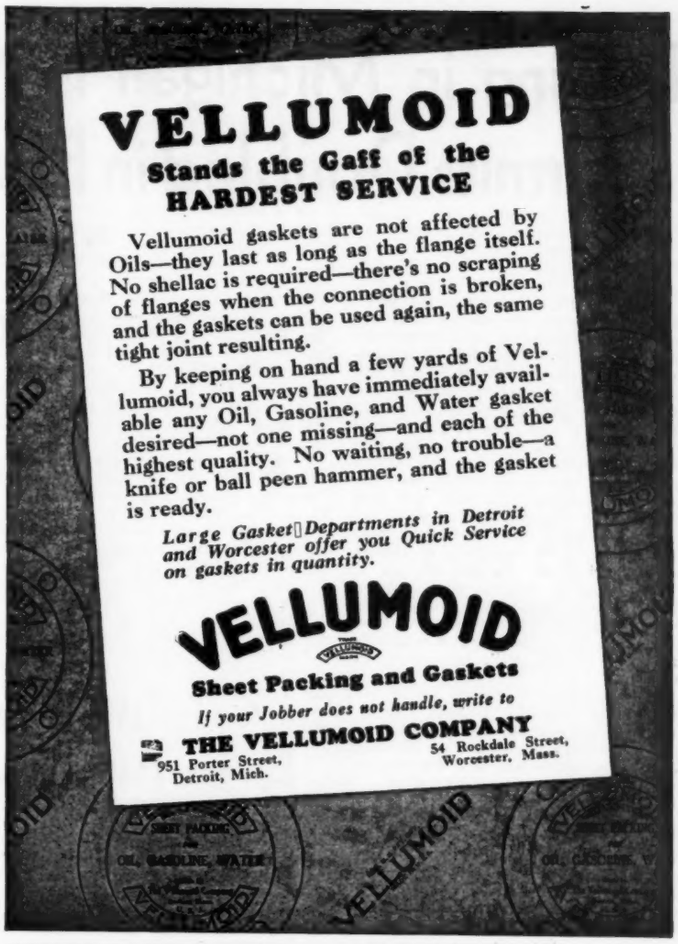
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The Oil and Gas Journal
Tulsa, Oklahoma

Drilling in Michigan Is Nearing Peak, 200 Tests; Permits Doubled in First Three Months of 1934

By PAUL A. ELLIOTT
Staff Correspondent, Michigan Fields

MUSKEGON, Mich., Apr. 2.—Michigan developments are moving toward a new drilling peak with nearly 200 wells, nearly double the number of permits issued during the first three months and new productive areas being opened. New wells are drilling in 9 of the 11 proved fields, while new interest in gas to meet potential demands of metropolitan centers has resulted in a renewed drilling program in the two Central Michigan gas pools. Greatest oil activity just now centers in a southerly extension of the Porter Township, Midland County, pool with many rigs in operation, or rigging up in Sections 20, 21, and 28.

An increasing interest also is being shown in the Dundee oil prospects in Ogemaw County where three new commercial producers, including a new 200-bbl. Pure Oil Co. well, have been developed.

Gas developments center about the Broomfield Township, Isabella County, and Austin Township, Mecosta County, each rated with an open flow capacity of between 50,000,000 and 100,000,000 feet a day.

Permits Doubled

Permits for 50 new locations were issued during March, bringing the total for the first quarter to 120. About one-fourth are for extension or semiwildcats, some in Saginaw, Allegan and Genesee Counties.

About 1,000 bbls. of new production was added by four new wells and doubling of the daily flow of a fifth well drilled into the Dundee a week ago. Three others also went into the pay but were not yet completed.

An unusual development was the completion of Pure Oil Co.'s No. 1 Bond Root, N SE NE Section 3-13n-2w, Jasper Township, Midland County, as a 300-bbl. upper Traverse producer. While numerous Central Michigan wells have struck upper Traverse production on their way to the Dundee, few have been completed at the lesser depth. The Bond-Root well also is about a mile west and a mile south of previous production, a considerable extension of the Jasper-Yost Pool. It was completed at 2,943 feet, or about 500 feet short of the Dundee.

Ogemaw County

Pure Oil Co.'s No. 1 Mary Fisk, SW SE SW Section 27-22n-2e, West Branch Township, Ogemaw County, also was completed as the largest Dundee well yet encountered in this field, about 50 miles north of the Mount Pleasant area. It made 126 bbls. in 11 hours after acid treatment for pay encountered at about 2,700 feet and was estimated good for 150 to 200 bbls. a day. Two other Ogemaw wells flowed 40 and 70 bbls., respectively, from the Dundee, one Dr. C. L. Hess' No. 1 Richards-Fisk, a direct offset to the Pure well, and McClanahan Oil Co.'s No. 1 Heintz in Ogemaw Township, several miles distant. McClanahan Oil Co.'s No. 1 Ora Carroll, SW NW Section 29, West Branch Township, also filled up about 1,500 feet with oil struck in the Dundee at 2,730 feet, or about 168 feet in the limestone. It will be treated with acid. Theodore Oil Co.'s No. 2 Ogemaw County Country Club, SE SE SW Section 20, West Branch Township, struck a good show of oil about 17 feet into the upper Traverse with indications it would make a commercial well. A third well is being started on the lease. No. 1 was a small upper Traverse producer. Half a dozen wells shut down in the Traverse after failure at this depth may be drilled to the Dundee in view of new developments, while several new projects are starting.

Stoddard & Darke's No. 3 James, M. S. Emery, SW NE NE Section 21, estimated good for 550 bbls. a day when drilled in, last week flowed about 1,000 bbls. a day at 3,430 feet.

Fred J. Turner and others' No. 1 Megill, NE NE NE Section 28, Porter Township, was estimated good for about 50 bbls. a day at 3,435 feet.

Two new Dundee wells were being completed in Greendale Township, Midland County. One was Branigar, Giffert and Reasor's No. 1 Fred and Hattie B. Sias, SW NW SE Section 8-14n-2w, increased from 30 to 50 bbls. a day by acid treatment. The other, Pure Oil Co.'s No. 3 McCann, NE SE NE Section 7, had more than 1,200 feet of oil in the hole at 3,585 feet and will be treated with acid.

Pure Oil Co.'s No. 1 D. Alspaugh, NW NE NW Section 2-13n-2w, Jasper Township, was drilling in with a light show in the Dundee.

McClanahan Oil Co.'s No. 2 Breu, SE SE NE Section 2, Porter Township, was shut down on top of the Dundee at 3,375 feet to be drilled in soon.

Two Central Michigan dusters were Gordon Oil Co. and Edward Stewart's No. 1 John McCallum, NE NE NE Section 29, Porter Township, which struck a light show of oil last week but was abandoned at 3,468 feet, and Mellon-Pollock Oil Co.'s No. 3 George S. House, N NW Section 26-16n-4w, Vernon Township, Isabella County, is to be abandoned at 3,765 feet after failing to develop commercial production by acid treatment.

Newaygo County

Nine years of hard luck were climaxed last week in the Newago Prospecting Co.'s No. 1 Ichenberg Brothers, Section 7-16n-11w, Newaygo Township and County, when it was drilled into salt water after a show of oil in the Dundee. It was the oldest active drilling project in Michigan. Oil and gas were encountered at 3,368 feet and the hole was bottomed at 3,450 feet.

Muskegon County

Shoup Oil & Gas Co.'s No. 3 George H. Shoup, Section 8-10n-16w, Muskegon Township, Muskegon County, made about 150,000 feet of gas when deepened from an original Dundee oil and gas well into the Monroe pay. Monroe gas was first encountered at 2,239 feet and the well drilled to 2,249 feet before a shot. Two other wells on the Muskegon River flats, one in Section 9 and the other in Section 17, Muskegon Township, are drilling to the Monroe while a new well has been started in Section 22, toward prospective upper Traverse production as an offset to a recent 100-bbl. producer.

Oceana County

H. C. Nelson's No. 1 Mrs. Cozy Ackerman, NW NW SW Section 31-15n-16w, Elbridge Township, drilled into the upper Traverse without striking commercial production and will be carried to the Dundee.

Mr. Nelson's No. 1 Viola Smith, SE NE NE Section 36-15n-17w, Hart Township, has been plugged back after drilling through upper Traverse oil sands into bottom water and is now producing as a small pumper. John B. Northcott's No. 1 Jane Pinder, SW SW Section 31, Elbridge Township, direct east offset to the Nelson-Smith well, is drilling at 1,500 feet and expected to be in the upper Traverse within a few days. Mr. Northcott also is moving in a rig for a new test on the McKenzie Smith lease in Section 31, Elbridge Township, between the principal producers in the Oceana Pool and the old discovery well, Edward DuVall's No. 1 Oscar Weirich, NE SE Section 31-15n-16w, Elbridge Township.

Nearing Completion

Eight drilling wells in the Porter and Vernon Township pools were nearing completion in the Dundee. Porter and Midland wells were: Stork Oil Co.'s No. 4 Charles Baxter, NW NW NE Section 22-13n-1w; Strange Oil & Gas Co.'s No. 4 Sam Walley, SW SE SE Section 16, cased at 3,354 feet; Pure Oil Co.'s No. 4 John Miller, SE NW SW Section 21; Pure No. 1-B J. B. Rayner, SE SW NW Section 18, and Fred Turner and others' No. 1 Root, SE SW Section 21.

Three Vernon-Isabella wells drilling in or nearing completion in the Dundee included Templemayr and Tope's No. 3 Russell, NW SW NW Section 22-16n-4w, which had failed to strike production though drilling more than 30 feet in the limestone; same company's No. 2 Woos, SW SW NW Section 22, shut down awaiting casing on top of the Dundee and Morris-Van Keuren's No. 1 Bowman heirs, NE NE NW Section 27, drilling below 3,500 feet. Two other Vernon wells about 3,000 feet deep or more were Stoddard and Darke's No. 1 E. Brooks, SW SW SW Section 14, and Mohawk Oil Development Co.'s No. 1 James Dun-

Six Completions in the Eastern Fields; Larger Allowable Increases Drilling

By STAFF CORRESPONDENT

PITTSBURGH, Pa., Apr. 2.—In a recent order, allowable production of Pennsylvania Grade crude was increased to meet part of difference between the present refinery demand and production. In West Virginia, the present allowable is now 11,700 bbls. a day, an increase of 500 bbls. In Pennsylvania, the allowable was increased 1,600 bbls. a day, bringing the total to 38,200 bbls. Ohio was allowed an increase of 500 bbls., which brings that total to 12,500 bbls. a day but it is not all Pennsylvania Grade crude. New York State has an allowable of 9,700 bbls. a day which is unchanged.

For the months of February and March, withdrawals of 5,100 bbls. a day were permitted. The schedule is now being formulated for the next succeeding three months, and with the peak months of the industry approaching, and in view of the time element necessary to increase production, withdrawals from stock cannot be decreased.

Completions continued few in the lower Eastern Fields and the majority were producers. Six wells were completed with an initial production of only 37 bbls. and there was but one gas well and two dry holes. Encouraged by the increased allowable, operators are now laying plans for renewed drilling and several new locations appear among the new work.

SOUTHEAST OHIO

In Southeast Ohio, there were only two completions reported, both small producers. In Colombiana County, T. R. Phillips Co. completed a test on the S. L. Hahlen farm in the NE Section 28, Knox Township. It was drilled in the Berea grit at 728 feet and produced 3 bbls. the first day natural. After shot, this was increased to 5 bbls. a day.

In Hocking County, Preston Oil Co. completed No. 1,538, on the Sunday Creek Coal Co. tract in the SW Section 11, Ward Township. When drilled in the Clinton sand at 3,565 feet, the well did not show much oil, but 24 hours after shot, the hole filled up 500 feet. It will be completed as a small producer.

WEST VIRGINIA

Three producers were completed in West Virginia during the week, the largest being the second test of King Knob Gas Co., on the Payton Lingler farm on Lambs Run in Murphy district, Ritchie County. It was completed in the Big Injun sand and is showing for 10 bbls. a day.

In Harrison County, Reserve Gas Co. drilled an old gas well, No. 1, on the A. A. Post farm in Union district, to the Speechley sand and to a depth of 3,265 feet. It will make a small pumper and is rated as a quarter-barrel well.

In Roane County, W. B. Heeter completed a test on the Maude Knopp farm on Buffalo Creek in Curtis district. It was drilled in the Salt sand at 1,600 feet and is showing for 3 bbls. a day.

Gas Wells

There was only one gas well completed in West Virginia during the week. In Pleasants County, on the waters of French Creek in McKim district, Dinsmoor & Co. completed a test on the Meredith Nichols farm through the Maxon sand to a depth of 1,695 feet. It is showing for a small gas well.

In Gilmer County, a test in gas territory proved dry. In DeKalb district, Laurel Oil & Gas Co. drilled a test on the Floyd W. Beall farm through the Injun sand to 1,775 feet without striking a paying formation.

In Wirt County, Peter Selman drilled No. 7 on the J. C. Hale farm in Clay district, through the Cow Run sand and found it dry.

Drilling in West Virginia

Reconditioning work is still in progress in West Virginia and is meeting fair success. The increased state allowable permits of additional work. In Sherman district, Calhoun County, Godfrey L. Cabot, Inc., treated No. 1 on the Laura V. Ash farm with acid and increased production from 2 to 5 bbls. a day.

In Boone County, Pure Oil Co. has started drilling No. 65 on the Federal Coal Co. tract in Sherman district, and has made a location for No. 66 and is grading road to a location for No. 67. This company has about completed Nos. 63 and 64 on the same tract. On the Williams Coal Co. tract, the same company has reached 3,251 feet and testing. In the same district, Godfrey L. Cabot,

(Continued on Next Page)

can, NE SW SW Section 9. Six other Vernon Township projects are active.

Mecosta County

Taggart Brothers, Inc., of Big Rapids, have started a new test, No. 6, in the Austin Township, Mecosta County gas pool, on the Robert S. Fish lease, C NW NW Section 9-14n-9w, in their program to develop enough natural gas to warrant starting construction of the 55-mile pipe line to Muskegon by the American-Michigan Pipe Line Co.

Columbia Oil & Gas Co. is rigging up for its No. 1 Albert Dutmers, SE NW Section 23, Hinton Township, Mecosta County, while Detroit interests are reported to have made location in the NW cor. Section 6, Morton Township, Mecosta County.

Pure Oil Co.'s deep test to the Dundee in Broomfield Township gas pool, No. 2 Willie, SW NE Section 5-14n-6w, is drilling at more than 3,200 feet and is being watched for a possible new pay sand. J. E. Harding's No. 1 William Todd, NE NE NE Section 7, a mile west extension test, was nearing the Michigan series gas sand level drilling at more than 1,300 feet. Five other tests are spudding or drilling in the township, several of them extension tests and others in the proved territory.

Wildcat Developments

Three central Michigan wildcats are nearing the Dundee, one in Porter, one in Isabella and the third in Lee Township. Bradner-Vaughan Development Co.'s No. 1 Brennan, NW SW SE Section 27-13n-1w, Porter Township, Midland County, a mile south of production, is drilling at about 3,300 feet with a hole full of oil and water from the Traverse. Wittmer Oil & Gas Co.'s No. 1 E. R. Mogg, C SW SW Section 12-15n-4w, Isabella Township, Isabella County, is below 3,500 feet, while L. G. Thompson's No. 1 James Oliver, NE SE NE Section 18-14n-1w, Lee Township, Midland County, was scheduled to drill into the Dundee soon. It is 3,500 feet deep.

Four central Michigan wildcats, all in Midland County, were shut down at depths ranging from 2,500 to 3,500 feet. S. S. Bankle's No. 1 R. Farnsworth, NE NE NE Section 15, Jasper Township; Lawson Oil & Gas Co.'s No. 1 Atkinson, NE SW Section 21, Lincoln Township; Lee Oil Development Co.'s No. 1 Hitsman, Section 13, Lee Township, and L. G. Thompson's No. 1 Shirts, Section 17, Greendale Township. Sun Oil Co.'s No. 1 George Piegols, C SW SW Section 9-15n-2e, Larkin Township, Midland County, is below 1,700 feet.

New Locations

Thirteen new permits were issued including seven in Porter Township, Midland County, and one in each of six other townships. Five counties are represented. New Porter locations are: Dokenva Gas Co.'s No. 2 Mabel Finch, NW SW SE Section 21-13n-1w; Fred W. Turner and others' No. 1 George Root, NE SE SW Section 21, and five Pure Oil Co. wells as follows: No. 4 A. Neitzke, SE NW SW Section 21; No. 4-B W. W. Hoyt, SE SW NW Section 21; No. 10 W. Neitzke, SW SW NE, Section 21; No. 11 W. Neitzke, NE NE SE Section 21, and No. 1-C Laura E. Root, SE NE NW Section 20.

Six other new locations are: J. V. Wicklund's No. 1 P. Flood, NW NE SW Section 15-16n-4w, Vernon Township, Isabella County; Thompson Brothers, Inc.'s No. 1 John Cook, SE SE NE Section 2-22n-2e, West Branch Township, Ogemaw County; Jasmid Oil Corp., trustee's No. 1 Anton Wezensky, SW NW SE Section 30-15n-3w, Denver Township, Isabella County; White Star Refining Co. and Smith Petroleum Corp.'s No. 1 Birch Run State Bank, SW NE SW Section 26-10n-6e, Birch Run Township, Saginaw County; Fletcher and Lehman's No. 1 Keeler-Mitchell, C NW SE Section 10-14n-6w, Broomfield Township, Isabella County, and Pure Oil Co.'s No. 1 Andrew Beukema, NE SW SW Section 27-4n-12w, Dorr Township, Allegan County.

Eastern Fields

(Continued from Preceding Page)

Inc., has made locations for Nos. 52, 53, and 54, on his lease on the Federal Coal Co. tract and also a location for No. 3 on the Central Trust Co. lease in the same district. Columbian Carbon Co. has made a location for No. 7 on the Broun-Cochran tract in Sherman district. Godfrey L. Cabot, Inc., has a permit for another well on the John Q. Dickinson farm in Sherman district.

In Kanawha County, Godfrey L. Cabot, Inc., has made a location for No. 43 on the A. D. Huntington farm in Cabin Creek district. In Elk district, Valley Gas Co. is down 1,545 feet on the G. W. Harless farm. Holly H. Osborne is drilling at 1,650 feet in No. 4 on the Goshorn and others lease in Big Sandy district.

In Cabell County, no wells are actively drilling. In Guyandotte district, Oscar A. Shears has been granted a permit for a well on the West Virginia Colored Orphans Home. In Huntington County, United Fuel Gas Co. now holds permits for wells on the J. W. Starkey lease.

Calhoun County is now extremely quiet. In Sherman district, C. B. Lewis and others have started drilling on the Virgil Hickman farm and are down 200 feet. Ohio Valley Gas Co. is testing its No. 1 on the D. C. Bailey farm at 1,916 feet. In Sherman district, R. Fowler and others have the material on the ground for a second test on the Lafayette Stump farm.

In Gilmer County, Stump Farm Oil Co. has been granted a permit on the A. H. Stump farm, Center district. In DeKalb district, C. A. Jarvis and others have reached 1,500 feet on the Susan A. Gainer farm.

In Doddridge County, Hope Construction & Refining Co. has started drilling No. 3,568 on the Harvey Smith farm in West Union district. In McClellan district, production on the Murphy Oil Co.'s No. 10, on the W. B. Allen farm reported as 5 bbls. a day has increased to 12 bbls. a day along with about 20,000 feet of gas.

In Wetzel County, Hathaway and Lucas have been granted a permit on the John R. Blatt farm in Proctor district. In this district, Wiser Oil Co. is building a rig for a second test on the Mary E. Yoho farm.

In Ritchie County, the depths of the wells drilling in Lost Run Pool, Clay district are as follows: C. F. Vincent & Co. drilling at 1,465 feet, the second Salt sand, in No. 5 on the John T. and Ella B. Fox farm; Ralph Roberts and others drilling at 1,425 feet, same formation, in No. 3 on the Sada McGinnis farm. S. V. Ridgeway has been issued a permit on the Hugh Ball farm.

In other parts of Ritchie County, the following work is noted: About 1 mile southeast of Harrisville, in Union district, M. A. D. Broadwater and others have completed a rig on the M. A. D. Broadwater farm. In Grant district, Burgy and others are drilling at 200 feet on the Lillie Husher farm and Beech Run Oil Co. is down 1,638 feet on the Z. E. Neely farm. In Murphy district, L. U. and L. E. McClure are drilling at 900 feet on the J. A. Gregg farm.

SOUTHWEST PENNSYLVANIA

Activity has decreased in Southwest Pennsylvania recently but attention has been directed to reconditioning old wells. One well was completed in this district. In Amwell Township, Washington County, Carnegie Natural Gas Co. completed a test on the Fred Baumberger farm at a total depth of 3,083 feet. Oil was struck at 3,072-74 feet and it is showing for 15 bbls. a day. In this township, the same company's test on the C. W. Dunn farm is shut down testing but there was a very small showing of oil.

In Amwell Township, Union Gasoline & Oil Co. has made a location on the L. Johns farm about 1,300 feet west of No. 3 on the G. L. Walker farm and up structure from that well which showed fair production in the Thirty Foot sand. Raymond Orrill & Co. are drilling No. 3 on the G. L. Walker farm deeper to the Fifth sand and is down 2,780 feet. The Pittsburgh coal was at 874 feet. Philadelphia Oil Co. is moving in material on the Hulda Jenkins farm.

In East Findlay Township, Washington County, the test of Myers, Hoskinson and others on the J. M. Clutter farm is still producing in excess of 100 bbls. a day and has averaged more than that since it was brought in on December 22. North of that well, A. E. Sproul's No. 1 is producing about 55 bbls. a day. Levier and others are now rigging up on the James Marshall farm.

In North Franklin Township, Washington County, E. H. and J. B. Tague are drilling at 550 feet in No. 9 on the Adaline D. McKennan estate. The Pittsburgh coal was at 475 feet. In Morris Township, James McCracken and others are down 850 feet on the H. B. Saunders farm.

In Greene County, Conklin, Phillips and others are spudding in on the James McClure heirs' lease on Meadow Run.

In Slippery Rock Township, Butler County, James H. Duff and others are drilling to the Oriskany sand on the Munnell farm. The present depth is 4,409 feet and in the lime 90 feet. The top of the lime was at 4,319 feet.

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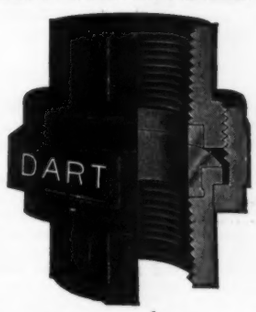

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Bulletin No. 431

W. H. NICHOLSON & CO.
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Outside Well in Lea Pool Proves Disappointment; Midway Dome, Wyo., Well Estimated 100 Bbls.

By TOLBERT R INGRAM
Staff Correspondent, Rocky Mountain Area

DENVER, Colo., Apr. 2.—Noble Brothers' No. 1 Shell-State, half a mile out from the nearest producer on the northwest side of the Hobbs Pool, flowed 70 bbls. in a one-hour test and shut down to treat with acid. Texas Co.'s No. 2-B Lynch, an outside well on the north of the Lea Pool, proved a disappointment after pumping 75 bbls. in 11 hours and 12 bbls. in the next 20 hours. Texas Co.'s No. 2 Moberly, in the Jal Pool, also proved to be a small well. Two new locations were reported, one in Curry County and the other in Roosevelt County.

There were no completions or new locations reported in Colorado, but the number of active operations showed an increase as several wells resumed after the winter shutdown.

In Wyoming, Midway Oil Corp.'s No. 1 Boyer, on the Midway Dome, is estimated good for 100 bbls. in the first bench of the second Wall Creek and is coring into the second bench.

There were no completions or new locations in the Cut Bank Field in Montana. One small well, pumping 8 to 10 bbls. daily, was completed in the East Shelby district, in Toole County, opening a small pool.

One new operation is starting in the bituminous sand area near Vernal, Utah.

NEW MEXICO

Lea County

Texas Co.'s No. 2-B Lynch, C SE SW Section 27-20-34, three-fourths of a mile north of the nearest producer in the Lea area, which last week was reported flowing 10 bbls. per hour while drilling at 3,639 feet, proved to be only a small well when tested. It was drilled to 3,670 feet and put on the pump. It pumped 75 bbls. in 11 hours. It was then gauged for 20 hours and made only 12 bbls. It is shut down for orders. Texas Co.'s No. 1 Lea, SW cor. NW Section 14-20-34, 2 miles farther north, topped the anhydrite at 1,562 feet, set the 10-inch at 1,581 feet with 75 sacks, and is waiting.

In the Hobbs Pool, Noble Brothers' No. 1 Shell-State, SE cor. NW Section 24-18-37, an outside well on the northwestern side of the pool, half a mile west of the nearest producer, flowed 70 bbls. in one hour on a company gauge from a total depth of 4,188 feet. It was then shut in to treat with acid. Gypsy Oil Co., Texas Pacific Coal & Oil Co. and Shell Petroleum Corp. control the undrilled offsets. Empire Gas & Fuel Co.'s No. 4 Fowler, NE SE NE Section 31-18-38, is drilling at 2,255 feet in anhydrite.

In the Eunice area, Atlantic Oil Producing Co.'s No. 2-B State, C NE SE Section 8-21-36, has completed one water well and is drilling two more. It is standing rigged with rotary tools. Continental Oil Co.'s No. 8-A No. 1 A. E. Meyers, C NE SW Section 8-21-36, cemented 13⅜-inch at 330 feet with 200 sacks and is drilling at 900 feet in red rock, and Tide Water Oil Co.'s No. 2 Coleman, C NW NE Section 17-21-36, is digging cellar.

In the Jal area, Texas Co.'s No. 2 Moberly, C NW SE Section 8-26-37, proved to be a small well. It was drilled to 3,400 feet and was estimated at 6 bbls. per hour with 7,000,000 feet of gas and 4 per cent water. It is three-fourths of a mile west of same company's No. 1 Cagle, completed in 1929 for 65,000,000 feet of gas, initial production, and 1¼ miles southeast of its No. 1 Shepard, which made 1,500 bbls. initial production. Barnsdall Oil Corp.'s No. 1 Forrest, NE NW SW Section 24-25-36, is drilling at 3,105 feet in lime, and Continental Oil Co.'s No. 24-A No. 1 Ascarte, C NW NE Section 24-25-36, is coring at 3,207 feet in lime. Empire Gas & Fuel Co.'s No. 1-B Lindley, C SE SW Section 13-25-36, is drilling at 3,140 feet in lime. Stanolind Oil & Gas Co.'s No. 29-B Farnsworth, C SW SW Section 7-26-37, has derrick completed and is moving in rotary tools.

Eddy County

Grayburg Oil Co.'s No. 5 Burch, C SW NE Section 19-17-30, Maljamar area, is drilling at 2,742 feet in lime, and Ralph Spearow and others' No. 1 McClelland, SW NW NE Section 22-22-23, western Eddy County, is pumping water and has lowered the column to 3,900 feet.

Curry County

Location has been staked for George Schoonmaker and others' No. 1 Hart, C NE SE Section 13-2n-32, in the Melrose district, where they are reported to have a block of 12,000 acres geologized with a magnetometer.

Roosevelt County

Conquistadores Oil Co. is reported to have made a location for its No. 1 Frank Good, NW SE NE Section 32-5s-30, Kenna district, in the southwestern corner of the county. F. J. S. Sur is reported to have made a magnetometer survey of the area. The location is approximately the same upon which C. S. Peterson and others erected a rig in 1931, but did not spud. At that time 15,000 acres were held in a community lease by seven landowners in the district.

San Juan County

Haney and others' No. 1 Hare, Section 25-29-11w, Aztec district, is reported moving in. R. C. Oswell's No. 4, SW NW NW Section 34-30-11w, is drilling up bailer at 1,700 feet, and Fred Barret's No. 1 Hart, SW NW SW Section 11-29-11, is drilling at 1,700 feet and showing some gas.

Aztec Oil Producers, Inc.'s No. 2, C SE SE Section 18-30-11w, is drilling at 800 feet, and Jack Amenda and others' No. 1, NE SW Section 25-30-12, is drilling at 300 feet. A. R. Goodale and others' No. 1 Hare, NW NW Section 23-29-11, is drilling at 100 feet.

San Miguel County

Canbra Springs Oil & Gas Co.'s No. 1, C NE NE Section 22-12-22, is drilling at 2,725 feet in red sand.

COLORADO

Moffat County

Stanolind Oil & Gas Co.'s No. 32 Parkinson, Lot 6, NW Section 23-4n-92, Iles Dome, is drilling at 2,008 feet. Mountain Fuel Supply Co.'s No. 3-B Whelan, C SE SW Section 15-12n-100, Hiawatha Dome, is building derrick, and its No. 4-B Wilson, C NE NW Section 23-12-100, is building derrick.

Larimer County

Eastman & Deininger's No. 1 Cement, NE SE NW Section 30-5n-69, Loveland district, is drilling in the top of the Muddy sand at 419 feet with a show of oil. Colorado Producers, Inc.'s No. 1 Foster-Motz, SW SE SE Section 17-4n-69, Berthoud district, is shut down at 3,200 feet for casing.

Montezuma County

McElmo Oil Co.'s No. 1 West, NE NW NE Section 31-36-17, McElmo district, is shut down at 1,700 feet waiting for casing.

Grand County

Interstate Oil & Refining Co.'s No. 1 Hinman, NE SE NW Section 11-2n-81, Dirt Creek, is bottomed at 1,800 feet and lowering 8¼-inch to that depth. It is not yet in the sand.

Fremont County

John Milner and others' No. 1, SW SE SE Section 30-18-69, Florence district, is drilling at 1,100 feet in gray shale, and Waterville Oil Co.'s No. 1 State, SE cor. NW Section 16-18-69, Phantom Canon, is drilling at 2,565 feet in hard red lime.

Park County

South Park Oil Co.'s No. 1 Milligan, NE cor. SE Section 13-8s-76, Jefferson district, is drilling at 3,225 feet.

Routt County

Mid-Colorado Petroleum Co.'s No. 1 Omholt, NE cor. SE Section 29-4n-87, Fish Creek, which has been shut down for some time at 2,250 feet, has lowered 10-inch to bottom and will resume to go to the Sundance. It had around 1,000,000 feet of gas per day in the Wall Creek at 1,917 feet.

WYOMING

Carbon County

Earl W. Reeder, Inc.'s No. 1 Union Pacific, C SW SW Section 19-20-83, Overland Dome, is drilling at 4,315 feet with no important change since it topped the first Muddy sand at 4,120 feet, where there was an increase of 200 feet in the oil in the hole.

Ohio Oil Co.'s No. 1 A. J. Hazlett, NE NW Section 34-23-79, which was plugged back from 4,083 feet to complete as a gas well in the Sundance, cemented the 6⅝-inch at 2,010 feet and is preparing to test. Producers & Refiners Corp.'s No. 4 Wertz, SW cor. SE Section 7-26-89, Wertz Dome, is cleaning out at 2,734 feet. Total depth is 3,541 feet.

Natrona County

Midway Oil Corp.'s No. 1 Boyer, SW NE NE Section 23-35-79, Midway Dome, is coring at 5,176 feet and is through the

New Crude Producer Completed in Far South End of Turner Valley Field

By VICTOR LAURISTON
Staff Correspondent, Canadian Fields

CHATHAM, Ontario, Apr. 2.—Official figures of crude oil production from all Alberta fields show the February total was 106,797 bbls., compared with 110,716 bbls. in January. Production of Turner Valley naphtha was 103,048 bbls. in February compared with 105,946 bbls. in January. Turner Valley light crude dropped from 2,332 to 1,706 bbls. Red Coulee-Keho light crude production was down from 2,047 to 1,684 bbls., and Wainwright heavy crude declined from 391 to 359 bbls. Of the February production from Turner Valley, about 2,700 bbls. disappeared as handling losses. Sales exceeded net production and stocks of unsold oil at the end of February were reported at 19,521 bbls., compared with 21,365 bbls. at the end of January.

Detailed figures for February show deliveries from 40 different companies in Turner Valley, though the list includes companies whose deep lime production has been taken over by the Royalite Oil Co. The largest individual producing agency is Royalite Oil Co., with 37,796 bbls. for the month. This includes recoveries secured through the Royalite absorption plant. Miracle Oils, Ltd., had the second largest production, with 7,322 bbls. Sterling Royalties' No. 1 well, completed a few months ago, ranked third with 6,857 bbls., while Becker Syndicate's No. 2 Anaconda, the most recent completion in Section 28-18-2w5, came fourth with 6,199 bbls. for the month, or somewhat better than 221 bbls. a day. Freehold-Mar Jon's No. 1, another recent producer, with 5,881 bbls., ranked fifth.

In the border fields, Vanalta Oils, Ltd., accounted for 1,233 bbls. of the Red Coulee production, the O'Neil interests having 428 bbls. Hudson's Bay Oil & Gas Co.'s No. 1 Keho, in the Keho Lake Field, delivered 23 bbls. for the month. In the Wainwright Field, Saska-Wainwright's No. 1 delivered 247 bbls. and Gold Standard Oils, Ltd., produced 112 bbls.

Highwood-Sarcee Producer

Highwood-Sarcee Oils' No. 1, LSD 16, Section 21-19-2w5, in the far south end of the Turner Valley Field, has been swabbing and is unofficially reported to have produced 150 bbls. of light crude on a four-hour test. Production comes from the Dalhousie sand between 5,046 and 5,075 feet, but the test will be drilled to the bottom of the brown sand in the Dalhousie before a definite test. The well looks like a good commercial producer at the present depth. Shortly after the well first blew in, it overflowed the 250-bbl. tank.

The strike at this point, a half mile southeast along the structure from the nearest crude naphtha producer, has stimulated new drilling. The first new test in Section 21-18-2w5 has been announced by George T. Wright and George W. Myers, who financed Pacalta Oils' No. 1 test in Section 28. Wright and Myers have located a test on acreage secured in LSD 14, Section 21, west of the Highwood-Sarcee producer. North and a little west,

(Continued on Next Page)

first bench of the second Wall Creek, which was topped at 5,146 feet. The core showed saturation and it is estimated the first bench will be good for around 100 bbls. per day. The second bench of the second Wall Creek is where the best production was found in the discovery well. It is running around 30 feet higher than the discovery.

Converse County

Wyoming Southern Oil Co. and S. H. Keoughan's No. 1 Wisda, near C Section 27-32-69, Shawnee district, is shut down at 665 feet waiting for completion of test on the Midway Dome. At this depth it had a show of gas. R. J. Dilger and others' No. 1, NE cor. SE Section 32-31-72, Poison Lake district, is drilling at 1,030 feet in quartzite and probably will be abandoned. It had a show of oil just above 1,010 feet at which depth pipe was cemented.

Niobrara County

Ed Shogren and others' No. 1 Olinger, NE NW Section 1-36-63, Old Woman Creek, is drilling at 1,100 feet, and Interstate Oil & Refining Co.'s No. 1 Morrell, NW NE SE Section 2-39-61, West Mule Creek, is drilling at 2,600 feet, at which depth it had penetrated a sand showing saturation.

Sheridan County

Sheridan Syndicate's No. 1 Allison, SW SE Section 15-55-85, Beaver Creek, is drilling at 600 feet.

Big Horn County

W. O. Taylor and others' No. 1 Hoskins, Lot 5, Section 25-56-97, Byron district, is drilling at 2,810 feet in shale after passing through a water sand topped at 2,687 feet.

Park County

Stanolind Oil & Gas Co.'s No. 21 Rosenberg, NE SW NE Section 26-58-98, Frannie Field, is drilling at 2,005 feet, and Frannie Oil Co.'s No. 2 Northern Pacific, SE SW SE Section 23-58-98, is drilling at 956 feet.

Lincoln County

Superior-Wyoming Oil Co.'s No. 1-A Government, SW NE NW Section 3-26-113, La Barge district, is drilling at 700 feet.

Sweetwater County

Mountain Fuel Supply Co.'s No. 2 Union Pacific, C SW SE Section 11-19-104, North Baxter Basin, is drilling at 300 feet.

MONTANA

Glacier County

There were no completions or new locations in the Cut Bank Field this week. Routine operations were as follows: Alberta-Pacific Consolidated Oil Co.'s No. 3 Kiesel, NW cor. Section 11-34-6w, is waiting for casing at 2,879 feet, total depth. A. B. Cobb's No. 2 Walburger, C NW SE Section 35-35-6w, is drilling at 2,600 feet. Dakota-Montana Oil Co.'s No. 1 Gilham, C Lot 4, Section 3-34-6w, is drilling at 1,000 feet. Dunstall and others' No. 1 Kennerly, NE NW Section 22-34-6w, is drilling by tools at 2,875 feet, 2 feet off bottom. R. C. Jeffries and others' No. 1 Clark, C SW SW Section 3-34-6w, is a near completion at 2,975 feet, total depth. The pay was found at 2,919-67 feet and oil rose 1,500 feet in the hole. Rods and tubing are being run. Montana Headlight Oil Co.'s No. 2 Williams, C NE NE Section 11-34-6w, is drilling at 2,300 feet.

Montana Power Gas Co.'s No. 1 Neill, C NE Section 20-33-5w, is drilling at 618 feet, and its No. 2 Seeba, C E half E half NW Section 2-34-6w, is drilling at 2,500 feet. Nyhagen-Bell's No. 2 Anderson, NW cor. SW Section 26-35-6w, has rig on location, and Nadeau Brothers' No. 2 Van de Mar, SW NW Section 35-35-6w, is drilling at 400 feet. Par Oil Co.'s No. 2 Haines, SE cor. SW Section 2-34-6w, is drilling by tools at 2,840 feet, total depth. Producers Development Syndicate's No. 1 Eniarson, SW NW NW Section 29-32-4w, South Cut Bank, is fishing for bailer at 2,040 feet.

Santa Rita Oil & Gas Co.'s No. 3 Cardwell, SE NE Section 15-35-6w, is rigged and ready to spud, and its No. 1 Hardy, C Lot 5, Section 27-35-6w, is rigging up. Same company's No. 2 Whetstone, C Lot 4, Section 22-35-6w, cemented the 12½-inch at 550 feet with 50 sacks.

R. C. Tarrant's No. 2 Britton, SW NW SE Section 14-34-6w, is drilling out plug after cementing the 5-inch at 2,902 feet, and his No. 3 Britton, C NE SW Section 12-34-6w, is drilling at 300 feet.

Texas Co.'s No. 1 Antrim, C Lot 4, Section 27-35-6w, is standing cemented at 518 feet. The 10¾-inch is at 226 feet. Same company's No. 1 fee, Lot 7, Section 15-35-6w, is drilling at 575 feet, and its No. 1 Long, NW SW Section 23-35-6w, is rigged and ready to spur. Texas Co.'s No. 2 Purdy, C NE SW Section 35-35-6w, is drilling at 1,556 feet, and its No. 2 Yunck, SW SW Section 14-35-6w, is ready to cement 12½-inch at 525 feet, total depth.

Teton County

R. C. Tarrant's No. 1 Porter, SE cor. NE Section 35-27-5w, West Pondera, is drilling at 2,100 feet.

Toole County

C. Leonard Smith and others' No. 1 Mowat, SW cor. SE Section 7-33-2e, East Shelby district, is pumping 8 to 10 bbls. per day from sand at 1,173-80 feet, after plugging back from 1,680 feet.

SOUTH DAKOTA

Lakota Development Co.'s No. 1 Knude, SE SE Section 20-10s-4e, Shiloh district, in Fall River County, which resumed recently at 3,030 feet, has cleaned hole to bottom and is making new hole at 3,244 feet.

UTAH

Wasatch Petroleum Co., composed of Boise, Ida., people, is moving in materials for a cable tool test in the NW Section 7-5s-21, Vernal district, Uintah County. Location is in the vicinity of Dog River, southwest of the town of Vernal. This is in the area of the noted bituminous sands which lies close to the surface and are saturated with heavy black oil.

Ramsey Petroleum Co.'s No. 1 Weightman, SW NE SW Section 18-26-7e, Lost Chance Dome, Emery County, is drilling at 1,745 feet.

Canadian Fields

(Continued from Preceding Page)

Carleton Royalties' No. 1 has spotted an offset to Highwood-Sarcee's No. 1 in S half LSD 2, Section 28-18-2w5. The acreage was secured from Royalties Oil & Share Corp. The same interests recently arranged to complete Hoffar-Lundy Syndicate's No. 1 in LSD 13, Section 22-18-2w5, which offsets the Highwood-Sarcee well to the east. Hoffar-Lundy's No. 1, LSD 13, Section 22-18-2w5, has been standing close to 4,300 feet with pipe nearly to the bottom and may resume within a few weeks.

Results secured in Highwood-Sarcee's No. 1 lend added interest to Union Drilling Co.'s No. 1 in LSD 8, Section 21-18-2w5, approximately a half mile south, which has been standing at 2,758 feet but is expected to resume in the spring.

Mar Jon Section

In Section 28-18-2w5, Mar Jon Oil Co.'s No. 2 Kindersley, LSD 10, bottoming at 5,870 feet, shows stronger gas pressure, and will probably be finished at this depth as a small producer. Additional gas was met in the lower lime.

In the same section, Pacalta Oils' No. 1, LSD 7 is drilling below 4,735 feet, and looks like the next producer. A fair wet gas show was struck at the Dalhousie around 4,675 feet, and the drill is nearing the brown sand horizon of the lower Dalhousie where light crude was met in the Highwood-Sarcee well. The test is logging about 200 feet higher than the Highwood-Sarcee and should get the light crude horizon at around 4,850 feet. Publix Oil & Gas Co.'s No. 1, LSD 8, is drilling below 2,150 feet. Spooner

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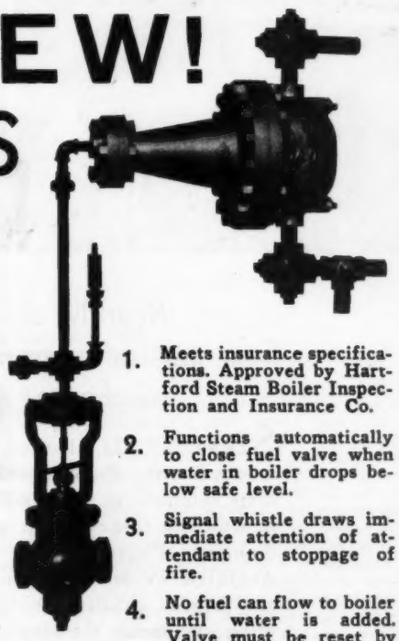

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Oils' No. 5 Anaconda, LSD 1, is reported drilling below 4,325 feet.

New Tests Under Way

Among the newer tests in Section 28-18-2w5, Director Royalties' No. 1, LSD 16, is making new hole below 2,175 feet after passing through the cardium sands at 1,660 feet. Farther west and a little south, Richfield Royalties' No. 1, LSD 5, is drilling below 300 feet. This is a Becker Syndicate venture, with Frank Becker as supervisor and R. H. Burns head driller. Location is on the west side, less than a half mile south and west of Becker's No. 2 Anaconda. It may get crude oil instead of naphtha in the lime horizon. To the east, British Dominion Oil & Development Corp.'s No. 4, LSD 6, is preparing to resume after setting 21-inch conductor pipe at 140 feet. Century Royalties' No. 1, LSD 14, Section 28, is drilling below 2,450 feet.

South Turner Valley

On the east side, North West Co.'s No. 1 C. & E.-Longview, LSD 5, Section 27-18-2w5, is drilling close to the Dalhousie sand, in a sandy shale below 4,985 feet. The drill is within a few hundred feet of the brown sand which yielded light crude in the Highwood-Sarcee well, a short distance south and west. On the west side of the Mercury tract, Associated Royalties' No. 1 Spray, LSD 9, Section 5-19-2w5, is at 3,810 feet.

Central Turner Valley

In the Central Turner Valley, Okalta Oils' No. 4, LSD 8, Section 1-20-3w5, has plugged back to 2,885 feet and is redrilling to straightrun crooked hole.

Hunter Valley Resumes

In the forest reserve area west of Olds, Hunter Valley Oil Co.'s No. 1 McLaren, Township 31-10w5, which has been shut down for the winter, resumed work on March 15.

Moose Mountain Test

On the Moose Mountain structure west of Calgary, Elbow Oils' No. 1, LSD 11, Section 35-22-5w5, is drilling below 4,125 feet, believed close to the Dalhousie sands.

Pekisko Hills

On the Pekisko Hills structure south of Turner Valley, Pekisko Hills Co.'s No. 1, LSD 6, Section 6-17-2w5, is below 105 feet.

Watson Structure

Drilling will be resumed in April on Raven Oils' No. 1, Section 20-9-2w5, on the Watson structure in the southern foothills. The test, which has been spudded to 50 feet and later shut down, was taken over last year by Dr. F. E. Sandercock and associates of Calgary, who deepened and cemented 20-inch casing at 80 feet after striking a considerable gas flow at around 70 feet. The Watson structure has been regarded by geologists for some years as a promising area with potentialities of crude oil at comparatively shallow depth. Source Rock Petroleums, Ltd., has a test standing at 60 feet in LSD 13, Section 21-9-2w5, but no arrangements have been made for resumption. Recently Mar Jon Oil Co. took over extensive acreage of Southfield Petroleums, Ltd., and will, it is understood, start a test later.

Oil City Test

In the old Oil City Field, Waterton Lakes Park, Oil City Royalties' No. 1 Patrick, Section 30-1-30w4, will likely resume in the spring.

Skiff Field

In the Skiff Field, southern Alberta, derrick has been moved from Devenish Petroleums' No. 3 producer to Devenish's No. 5 in LSD 4, Section 27-5-14w4. No. 5 offsets the two earlier producers. Nos. 1 and 3 have been opened since work was started, and both wells flowed fair quantities of asphaltic crude. Analysis showed 19.9 gravity crude, with gasoline 19.1 per cent, kerosene 3.1, gas oil, 14.8 and lubricant stock 20.3. The company is planning a systematic testing of the field, working from the known production; and if sufficient production is developed, it is likely that a cracking plant specially equipped to handle the heavy crude will be erected in the field. The first production was developed by Devenish Petroleums, Ltd., of Calgary, in 1927, the main crude production being encountered in the Ellis between 2,916 and 3,080 feet.

Dover Gasser

In the Dover Field, Kent County, Ontario, Ajax Oil & Gas Co.'s No. 8, Antaya farm, Lot 1, Concession 4, Dover East Township, has been finished in the Trenton limestone below 2,900 feet with a gas flow of 500,000 feet a day. Location was 1,000 feet from Ajax's No. 7 on the same property, which got a small gas flow, around 80,000 feet a day, in the Trenton at 3,181 feet, but was abandoned when a shot damaged the casing. It is reported No. 9 will be started shortly.

In the Dawn Field, Lambton County, Union Gas Co.'s No. 73 has been located in NW Lot 25, Concession 2. Union's No. 74 has been located in Lot 24, Concession 8. Kiser Brothers of Chatham will handle the drilling.

Oil Industry's Electrical Problems to Be Discussed

Subjects of interest will be discussed at the annual convention of the Petroleum Industry Electrical Association to be held in the Baker Hotel, Dallas, Tex., April 12, 13 and 14. These will include attachments for telegraph and telephone on foreign poles, standardization of material, the NRA, power agreements, various contracts with telephone and telegraph companies and railroads, safety first in all its branches, electrical corrosion of pipe lines and others, all important to the companies represented at the convention.

About 50 delegates are expected, representing Chicago; St. Louis and Kansas City, Mo.; Shreveport, La.; Houston, Dallas and Fort Worth, Tex.; Independence, Kans.; Tulsa, Bartlesville and Muskogee, Okla., and other cities.

A banquet will be held Friday evening, with an expected attendance of 70, including nonmembers of the association who are interested in the electrical branch of the oil industry.

The officers of the association are: President, C. O. Shirley, Phillips Petroleum Co., Bartlesville; vice president, Morris Chambers, Standard Pipe Line Co., Inc., Shreveport; secretary and treasurer, H. E. Browne, Sinclair Prairie Pipe Line Co., Independence.

Arbitration Board on Kettleman Allocation

LOS ANGELES, Calif., Apr. 2.—A board of arbitration, consisting of R. P. McLaughlin, formerly supervisor of the California State Mining Bureau; Walter Clute, consulting engineer, and W. N. Lacey, petroleum technologist at California Institute of Technology, has been holding meetings involving allocation in the Kettleman North Dome. A recommendation is expected to be made to the Central Committee of California Oil Producers before the May allocations. The board can recommend an increased quota for the North Dome and an adjustment of allocation within the field itself. The central committee was unable to adjudicate the issue and requested operators to select a disinterested body to make recommendations. Operators then requested the central committee to select the board.

The Kettleman North Dome Association has maintained that production within the field should be based on an acreage basis instead of on an arbitrary allotment. Operators developing acreage outside concede this contention has certain merit but maintain that Kenda and Standard should recognize their position on the structure and regulate their activities accordingly. Kenda and the Standard have concentrated their activities on acreage adjacent to that being developed by operators holding leases on fee acreage around the edge of the structure. This has tended to intensify the situation with the result that Kenda and Standard have found it necessary to undertake unnecessary drilling to prevent what they claim is undue drainage. One of the problems will be to determine the importance that should attach to potential production and the relative importance of each operator with respect to acreage. Gas depletion has become a very important factor.

Recovery Is Under Way Ames and Rodgers Say

Although reporting net loss of $491,003 for 1933, Texas Corp. in the last six months last year earned approximately $11,000,000 net profit, which was equivalent to $1.18 a share on the 9,352,371 shares of $25 par capital stock outstanding after the deduction of 498,866 shares held in the treasury. During the first six months last year low prices resulted in losses in producing, refining and marketing, which produced net loss for that period of approximately $11,500,000.

"Entertaining the hope that recovery is under way," C. B. Ames, chairman of the board, and W. S. S. Rodgers, president, say in the report to stockholders, "your attention is called to the record of the company during the four years of the depression: 1930, 1931, 1932 and 1933. During this four-year period, our volume has been well maintained, but prices have been so low that results have been very unsatisfactory. During these four years we have paid to the stockholders in dividends $70,905,572. We have reduced our funded and long-term debt $19,651,486. We have made expenditures for plant account, including replacements, during the period, of approximately $103,000,000. We have maintained the properties in good condition and have made material reductions in operating expenses.

"During the entire time we have continued our conservative methods of accounting. We have made our customary charges for depreciation and depletion. We have continued to charge the intangible costs of drilling wells to expense instead of to investment. We have not written down our assets, or any of them, so as to reduce depreciation or depletion charges and thereby increase nominal net earnings."

BAZILLE DAVIDSON DIES

OIL SPRINGS, Ontario, Apr. 2.—Word has been received of the death at Guadalajara, Mexico, of Bazille Davidson. Mr. Davidson, a native of Oil Springs, had been a resident of Mexico for a number of years.

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TECHNICAL QUESTIONS ANSWERED

By Charles K. Francis, Ph. D., Technical Editor

This department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit their problems to Dr. C. K. Francis, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists and all those engaged in the various phases of plant operation; also those connected with marketing and utilization of petroleum products.

Questions should be submitted in as much detail as possible.

Inquiries must be signed but only the given initials will be printed. The source of the question is considered to be confidential

Questions requiring a discussion of patents, the use of intricate formulas, extended computations, or cost estimates cannot be considered.

When the matter is of general interest the reply will be published within a reasonable time.

Chemicals Used in Petroleum Refining—Lime

This is part of a series of brief descriptions of chemicals used in Petroleum refining. The previous articles were Sulphur, March 15, 1934; Sulphuric Acid, March 22, 1934; Sodium Hydroxide, March 29, 1934.—Editor.

Lime may mean either the calcium oxide or the hydroxide because the word is applied in the trades to both substances, but it is better to use the more definite terms quicklime for the oxide and hydrated lime for the hydroxide, or slaked lime. The refinery commonly uses the hydrated lime for treating and inhibiting corrosion. The commercial product should be essentially a calcium compound, with no large percentage of magnesium.

Lime containing more than 5 per cent magnesium is known as magnesium lime or dolomitic. Magnesium is objectionable in refinery lime because there is usually a small quantity of salt present in the oil, which forms magnesium chloride, and this has a tendency to dissociate, in the presence of water, producing hydrochloric acid, a powerful corrosive.

Lime CaO, is made by burning limestone, $CaCO_3$, the products being lime and carbon dioxide. The simplest method, now used only for small scale operations, is to pack the stone above wood in a kiln, set fire to the wood, bring the temperature to a red heat and hold the fire for two days. The lime is removed after allowing the kiln to cool.

The modern method, for large scale production, is to burn the stone in continuous kilns. These are of three types: (1) The mixed feed vertical type, in which alternate layers of limestone and fuel are charged to the kiln; (2) the vertical kiln in which the stone and fuel are kept separate; (3) the rotary kiln, similar to that used in the manufacture of portland cement. The crushed limestone is fed into a rotating kiln which is maintained at a high temperature by means of gas, oil or powdered coal. The rotary kiln produces a high grade lime, especially well adapted for chemical purposes, such as required in the treating of petroleum oils or as a feed with the oil to remove acids and corrosive sulphur compounds.

The hydrated lime is made by treating the oxide with water. This produced the compound $Ca(OH)_2$, calcium hydroxide. The lime is hydrated at the kilns, the manufacturer adding just enough water to make a fine dry powder, so finely divided that it will pass a 100-mesh screen. This is usually packed and shipped in paper bags.

Hydrated lime is preferable for petroleum refineries because in the process of manufacture the powder is run over sieves where pieces of stone and sand are removed more thoroughly than can be from the quicklime. It does not carry the hazard that exists with quicklime, when in contact with water and in a closed place, may develop a temperature of 750° F.

Properties. Quicklime, or calorium oxide. Formula CaO; molecular weight 56.07; specific gravity 3.15 to 3.40; melting point 4,658° F. A strong base, combines with sulphur to form sulphide.

Hydrated lime or calcium hydroxide. Formula $Ca(OH)_2$; molecular weight 74.09; specific gravity 2.078; loses water at 1,076° F. A weak base, combines with sulphur.

Price: Quicklime is usually shipped in barrels and hydrated lime in paper bags. The delivered price is about $14 per ton for the quicklime, and about $13 for the hydrated lime.

Neutral Oils Defined; Lub Oil Obtainable From Type Crudes

Explain what is meant by neutral oils. What is the lubricating oil content of the paraffin base crudes and the asphalt base crudes? In reading price quotations in The Oil and Gas Journal under Refining and Crude Prices I notice the Pennsylvania neutral oils are grouped according to viscosities at 70° F. with a maximum of 200 seconds. Are not neutrals of higher viscosities generally sold? Is not a flash of 400 to 405 abnormally high for a neutral of 150 seconds at 70° F., even though it is from Pennsylvania crude?—W. B. and L. O. C.

The neutral oils are obtained from that fraction of the crude oil known as lubricating distillate, or wax distillate, usually after the removal of wax. The lubricating distillate containing paraffin wax, a large part of which is in the amorphous form, must be redistilled for the purpose of converting the wax to suitable crystalline form to aid in its removal when cooled by the filter press. The oil from the press, pressed distillate, is the source of the neutral oils. A relatively small quantity of lubricating oil, nonviscous neutral, is obtained during the first distillation of the lubricating distillate.

The pressed distillate is redistilled to remove the lighter portions. Some refiners make several cuts at this stage to obtain stocks of nonviscous neutrals. The portion remaining in the still is the viscous neutral. The lower viscosity oils are used as spindle oils and light machine oils. The still residue is used under medium weight conditions in numerous industries and for making the lighter oils used in automobiles.

After distillation the neutrals are treated with acid and filtered for color and removal of tars, etc. Sometimes the distillates are not acid treated, but filtered or subjected to the action of some chemical, such as a selective solvent. The oil from the filter, which may be of the percolating or contacting type, first comes over water-white and then gradually darkens as the volume of the distillate increases to a dark reddish green.

Neutral oils are marketed showing a range in viscosity from approximately 60 to 300 seconds Saybolt, at 100° F. There is no exact meaning to either term nonviscous and viscous.

The yield of lubricating oils obtainable varies with the type of crude oil processed. The asphaltic oils may yield over 40 per cent; the intermediate or mixed base oils about 20 per cent, and the paraffin oils, of which the Pennsylvania oil is the most prominent, may show around 25 per cent. This refers to straight distillation with steam.

The lubricating fractions from crude oils of different types vary in their chemical composition and physical characteristics. Such properties as gravity, sulphur, carbon residue, boiling point and flashpoint are directly related to type or composition. Viscosity seems to require both composition and a selection of a number of fractions that fall within characteristic molecular groupings.

The gravities, flashpoints, viscosities and other properties may serve for classification purposes. The gravities of the paraffin oils are higher, for the same viscosities, than the asphalt base oils. Flashpoints and boiling points are lower. The high gravity, high flash and firepoints, and stability of viscosity, with slow drop when heated from 100° to 210°, or what is termed high viscosity index, have for many years been used to distinguish paraffin base oils. Pennsylvania grades, from other oils. A Pennsylvania neutral of 150 viscosity at 70° F. may have a flash of 400° F.

Volatility Is Not Indicated by Vapor Pressure Data

Can the vapor pressure test be considered as an indication of the volatility of different gasolines?—L. C. Y.

Vapor pressure and volatility are used, in respect to the properties of gasoline, in a technical way; that is, the terms have a special meaning in the petroleum industry.

The vapor pressure is measured under specified conditions, including the temperature, so means only the pressure exerted by gas and vapor under the conditions of test. Volatility refers to the data obtained when the gasoline is distilled under standardized conditions.

Petroleum products are not made up of a single substance but are mixtures of hydrocarbons. If gasoline were composed of a single pure compound it would have a fixed boiling point, so it would be possible to arrange a vapor pressure test for such a substance that would give some indication of volatility. Prof. G. G. Brown explains the relation between vapor pressure in University of Michigan Engineering Research Bulletin No. 7, 1927, page 58, as follows:

"This tendency to form vapor must not be confused with volatility, which is the degree to which a fuel will vaporize under specified conditions. The tendency to form vapor is measured in terms of vapor pressure. The vapor pressure apparatus measures the pressure exerted when the liquid fuel is placed in an enclosed space in equilibrium with a small amount of its vapor. If a large amount of vapor is allowed to form the liquid will not have the same composition and vapor pressure as the original fuel. This precaution is important. If the pressure on the fuel is increased under these conditions the small amount of vapor will condense the vapor, or gas, phase will be eliminated. The vapor pressure measured in this way is a measure of the tendency of the fuel to form vapor but is not an indication of its volatility unless the fuel is composed of a single substance such as normal octane."

High Gasoline Taxes Curtailing Gasoline and Car Sales

The statement has been made that gasoline taxes are causing a reduction both in purchase of gasoline and operation of cars. Can you give me any figures on this?—S. E. H.

The National Highway Users has prepared data relating to gasoline taxes, gasoline consumption, car registrations, and road conditions. One of the charts was presented in The Oil and Gas Journal, January 18, 1934, page 27. The condition shown for the year 1932 may be tabulated as follows, based on the year 1926:

INCREASE SINCE YEAR 1926

	Per cent
Total net gas tax	142.1
State tax only	118.2
Surfaced mileage	65.6
Gasoline consumption	34.5
Registration receipts	10.6
Total registrations	6.9

Registration receipts have been falling since 1930, total registrations since 1929, and gasoline consumption since 1931.

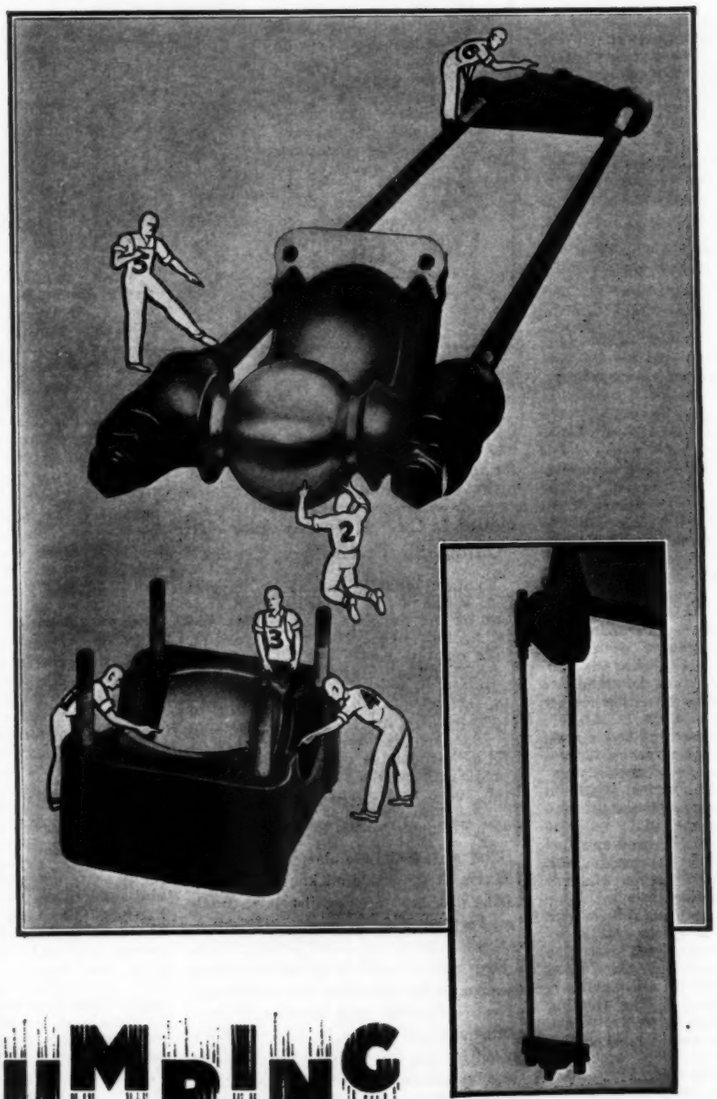
Roy F. Britton, director, National Highway Users Conference, states:

"It should be observed in this connection that probably the consumption of gas per car-mile was decreasing steadily during this same period due to improvements in automobile construction. For that reason it is possible to conjecture that the increase in car-mileage from 1929 to 1931 may have been much greater than the increase in the gas consumption line would indicate.

"On the other hand, a study of the chart suggests the desirability of analyzing comparative state trends to determine the effect that a sharp raise in gas taxes may have had on the trend in gasoline consumption and the trend in motor car registrations.

"A more detailed study of the trends on this chart in comparison with trends in individual states where the gas taxes are either materially above or below the average might lead to some more definite conclusion on the many conflicting theories on the subjects suggested."

Note STRENCTH *and* SIMPLICITY *of this* BEAM HANGER



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FIELD PROBLEMS FROM READERS

Edited by Thomas F. Smiley

This department is conducted in order that men connected with the drilling, producing and transporting branches of the petroleum industry may obtain aid in solving problems that confront them in their work. Readers are invited to send questions freely. These questions will be placed in the hands of persons capable of answering them authoritatively, and the answers, based on the best available information, will be published.

Each question should give as much detail as possible, especially if it involves depth of sands, types of sands and operations on adjoining or nearby properties. The source of questions will be considered confidential, and only the initials of the sender will be published. Questions involving patented processes, intricate formulas or estimates of cost cannot be answered. If an immediate answer is important, one will be given by mail when the writer requests it.

In this connection, The Oil and Gas Journal will be glad to publish articles from field men who have devised new methods or improved old ones.

Flow String's Design Determined by Judgment and Experience

In the operation of the gas-lift has any rule or formula been arrived at by which the producer may determine just the the type of flow string to use? I realize that varying conditions will have to be considered, but perhaps there are some general rules that may be used for guidance. I would appreciate any information along this line.—S. E. F.

You have raised a question on which there is not uniformity of opinion among petroleum engineers. Hallan N. Marsh, production engineer for the General Petroleum Corp., discussed this phase of gas-lift operation in his "Review of Developments in Gas-Lift and Pumping." Some of his comments should be of help to you. He said:

"Maximum rate of production in gas lift is dependent upon the correct subsurface installation as regards size and amount of tubing, minimum back pressure or resistance to flow at the surface, and correct amount of circulated gas.

"In most cases and with most companies, the design of flow strings is based on judgment and experience rather than theory. Many able attempts have been made to analyze gas-lift action and develop equations and factors which would permit of rational design. Where such elaborate mathematical methods are not used, experience has done much to indicate the size or sizes of flow string that will be most efficient for various conditions, but unfortunately no simple rule can be laid down.

"In the past there has been much controversy as to whether or not tapered flow strings are beneficial, and it was probably the belief of most engineers who had given the matter some study, which belief was supported by some practical observations, that tapering was quite advantageous. However, an article by John T. Hayward published in The Oil and Gas Journal November 17, 1932, indicates rather convincingly that tapering is of little or no advantage. Some theory is offered to support this contention and supplemented by a limited number of field experiments. A similar conclusion was reached by Moore and Schilthus in a paper published in The Oil and Gas Journal October 6, 1932, in which they state: '. . . this efficiency (secured with tapered tubing) can be closely approached by the use of a properly selected string of straight tubing.' Certainly, the conclusions of these investigators justify further investigation by those who believed that tapered tubing was a great advantage.

"Where potential production rate is very small, and in cases where it is desired to take only a small amount of production, very small tubing strings have proved successful in re-establishing natural or gas-lift flow where pumping had been resorted to previously. Tubing as small as 1½ inches is said to be in common use for this purpose and sizes as small as 1-inch, three-fourths inch and one-half inch have been used or proposed. A basis for designing such a string is set forth by R. R. Hawkins, engineer, the Texas Co., Tulsa, and published in The Oil and Gas Journal on October 8, 1931.

"While such installations have undoubtedly been very successful in many cases, it must be said that they have been unsuccessful in other cases, so it must be concluded that the formula does not take all of the vital factors into account.

"Subsurface pressure measurements are proving a great help in checking the relative efficiency of flow strings of various sizes and lengths. By measuring pressure in the flow string at many increments of depth while producing, a pressure-depth graph may be plotted. The steepness of the curve indicates the relative efficiency at any depth. Where tapered strings are used, noting whether the gradient is steeper just above or just below the depth at which size changes tells which size is better at that depth. By continuing such a test below the bottom of the flow string it may be determined whether the flow string is of better size than the casing surrounding it. It may be found that all the gas is in solution below the bottom of the flow string, as indicated by a gradient equal to that of oil, so that flow may be described as artesian."

Wants to Build Library of Books on the Oil and Gas Industry

It is my desire to build up a useful library of books relating to the general subject of the oil and gas industry. My education has been liberal and rather broad, but I have had practically no experience with the type of problems often met in field practice. I would like a list of books which you would consider of special value. So far I have been able to find very few books that would have any textbook value on the subject.—R. O.

There is a wide range of publications of the sort which you seek. First, it is suggested that you obtain from year to year the "Transactions" of the Petroleum Division of the American Institute of Mining and Metallurgical Engineers for late and authoritative information on oil field development and production. These volumes can be obtained from the Institute, 29 West Thirty-ninth Street, New York, at $5 each.

Useful books on petroleum production include "Petroleum Production Engineering," by Uren; "Deep Well Drilling," by Jeffery, and "Handbook of the Petroleum Industry," by Day.

Good works on petroleum geology include "The Geology of Petroleum and Natural Gas," by Lilley; "Practical Oil Geology," by Hager; "Field Methods in Petroleum Geology," by Cox, Drake and Muilenberg; and "Field Geology," by Lahee.

The "Natural Gas Handbook," by Diehl, is recognized as an authoritative work on this subject.

On the general subject of petroleum and natural gas "Petroleum in the United States and Possessions," by Arnold and Kemnitzer, and "Oil Fields in the United States," by Ver Wiebe, are excellent works. The latter deals mainly with the geological aspects of the subject.

Many other books might be named, but these should serve for a selection in establishing a nucleus for your library.

You can obtain valuable additions to your technical literature by writing to the U. S. Bureau of Mines, Bartlesville, Okla., for copies of its bulletins and technical papers on oil and gas.

A further suggestion is that you write to Miss Florence Lundell, librarian, Tulsa Public Library, Tulsa, Okla., for a bibliography on oil and gas subjects.

Why Was It Called That?

EARTHQUAKE

The earthquake is so called because it consists in a trembling or quaking of the earth's surface, attributed chiefly to faulting of the rocks. In connection with the Long Beach earthquake of March 10, 1933, in California, it is recorded that about 100 blackbirds had gone to roost in some trees. Although no preliminary tremors were felt by human beings, these birds became uneasy before the severe shock. During the shock the birds rose slowly in ascending spirals above the trees to a height of about 140 feet. They then descended slowly and settled noisily in the trees. Thereafter throughout the minor shocks they showed no sign of excitement. At their usual time near dawn, meadow larks and mocking birds began to sing and they gave their usual morning concert in spite of the tremors occurring almost every minute.

Does the Gas-Oil Ratio of Wells Change With the Field's Age?

Does the gas-oil ratio of a well change as the field moves from its flush stage, with the production steadily declining? If there is a difference is it an increase or a decrease? As the development of the field proceeds the rock pressure goes down of course, but the question in my mind is concerning the quantity of gas that will be produced with each barrel of oil. Can you tell me whether this remains stationary?—A. F. O.

This question could provoke discussion because its answer depends upon the mode of operation followed in producing the oil and gas from the particular field in question. Some engineers assert that gas-oil ratio is determined by the type of flow string selected and the method of operation. Others seem to believe that under natural conditions the proportion of gas to oil will increase with the life of the well and that this is desirable in order to obtain the maximum production from the well.

Regardless of which theory is accepted it has been proven in recent years that there is a critical pressure in every formation below which the gas that has been in solution in the oil will tend to leave the oil or come out of solution. As it leaves the oil the gas-oil ratio of the remaining oil is naturally increased, but the oil left behind is thicker and more difficult to move through the formation.

Instruments now available determine subsurface pressures in any well, also obtain bottom hole samples of the oil and gas. Coring can be carried on as the well is drilled into the producing formation and the cores studied in a laboratory. After this has been done the production man has available the necessary samples to determine the critical pressure of the gas-oil mixture as it exists in the formation, the pressure at which the gas leaves the oil and therefore the formation pressure at which the well should be produced.

If the well is produced then with practically no drop in formation pressure the gas-oil ratio will remain practically constant. The energy of the compressed gas within the formation will be fully utilized in driving the oil into the bottom of the hole. Mechanical means can be supplied to lift the fluid from the bottom of the hole to the surface and should be employed if this will reduce the gas-oil ratio below what it would be if formation gas alone were used to deliver the fluid to the surface.

There are no mechanical problems difficult to overcome in providing means for lifting the fluid from the bottom of the well to the surface, but when man attempts to repressure or reproduce underground conditions as they were originally before the reservoirs were tapped he is undertaking a difficult problem and one that is costly.

In the past the operator's object has always been to get the greatest amount of oil in the shortest possible time. That may be the best way to pay off capital investments, but it is the poorest way to conserve a limited natural resource.

In answer to the last part of inquiry it is recommended by engineers that every effort be made to maintain a constant gas-oil ratio during the life of the field and this practice has been adopted in several fields, particularly the Sugarland Field, Texas, which has been described in The Oil and Gas Journal.

NATURAL GAS DEVELOPMENTS

Texas Commission Report Attacks Gas Pipe Lines

AUSTIN, Tex., Apr. 2.—A report made to a senate committee by the Texas Railroad Commission says failure of the pipe lines to purchase ratably in the Panhandle Field was the primary cause for increased waste of gas in the area. The senate committee plans to start a series of hearings in Amarillo.

The report reviewed the legislation enacted to allow diversion of natural gas for purposes other than light and fuel. The commission stated the pipe lines refused to purchase gas from the independents, leaving them without a market because the pipe line companies had a monopoly on the domestic outlet and forced them to use their gas for other purposes to prevent drainage.

Use of gas in carbon black plants and gasoline extraction plants has increased wastage by approximately 200,000,000 feet of gas daily, the commission reported. The commission, however, warned against a return to conditions that existed before gas diversion was permitted.

"The State cannot continue its original conservation policy to the point of appropriating the properties of producers without a light and fuel market and delivering them to the pipe line companies with a monopoly on such market," the commission wrote. "It is possible that if a properly drawn bill was enacted to effect a complete divorcement of the pipe line companies from their producing subsidiaries and a constitutional bill was enacted to give us complete control of the gas production, we might regulate the withdrawals of gas in such a manner as to allow all producers a ratable market and correct, as far as possible, the inequities that existed heretofore.

"However, with the conflicting interests of the sour gas producers, the sweet gas producers without a market, the production of pipe line companies now having the sole benefits of the light and fuel market, the oil producers . . . it is almost impossible to suggest a solution that will cure the situation."

The report stated that permits to use gas for carbon black and gasoline extraction were subject to cancellation on opening of a reasonable market.

"In other words, all that is necessary to stop the alleged waste of gas is for the pipe line companies to provide such a market," the report stated.

"Without co-operation in this matter, or statutes that will effectively compel a market, the conservation of this gas for light and fuel purposes only is an impossibility."

Revenue from carbon black manufacturing and gasoline extraction is "much more" than that derived from royalty and rental payments from the gas utilities, the commission asserted.

Annual payments from gas utilities aggregate approximately $600,000. The commission reported carbon black and gasoline extraction enterprises had an annual pay roll of $3,795,000, taxable values of $20,000,000 and marketed products valued at approximately $14,000,000.

Charles Keffer, Amarillo Gas Co. attorney, told the Railroad Commission in substance that the commission was to blame for the situation in the Panhandle. He told the commission it had never fixed a gas-oil ratio in the Panhandle, leaving the oil-gas wells entirely without restriction while restricting gas wells to one-quarter.

He said the Railroad Commission's ratable taking order had been held by a court not to be equitable and that it called in some cases for the taking of an equal amount of gas from 160 acres as 1,000 acres. Mr. Keffer said the gas companies were willing to purchase gas from all in the field on a really equitable basis—one based on acreage, with a reasonable factor for open-flow capacity.

E. L. Rawlins Is Sought to Survey Michigan Gas

MUSKEGON, Mich., Apr. 2.—James R. Balch, chairman of the Michigan Public Utilities Commission, has asked Scott Turner, director of the U. S. Bureau of Mines, to assign E. L. Rawlins, of Michigan, to aid the State in an immediate survey of the natural gas reserves announced last week by Gov. William A. Comstock. Chairman Balch, at the direction of the governor, has started preliminary work to ascertain the gas reserves of Central Michigan before recommending action on two applications for new natural gas line permits now before the State Utilities Commission. One seeks to lay a 240-mile line to Detroit, Flint and Pontiac, while the other would serve Lansing through a 60-mile line.

Natural gas is now being utilized by about 150,000 Michigan residents. George O'Brien, assistant attorney general, said "no pipe line application will be held up because existing utilities have not written off their investments." He foretold early action by state officials to provide new and greater markets for Michigan natural gas.

F. R. Frye, oil and gas conservation engineer, will have charge of the survey for the State Department of Conservation, working with Manfred K. Toeppen, an engineer employed by the utilities commission.

Fifteen-Cent Tax on Gas Passes the Illinois Senate

CHICAGO, Apr. 2.—A 15-cent-per-thousand-foot tax on all natural gas sold from pipe lines in Illinois, voted March 28 by the Illinois senate, threw the natural gas industry of the state into excitement. It now goes to the house of representatives for action.

The tax would work a tremendous hardship not only on the industry, but would penalize consumers, it was stated by leading gas men. It also would mark the end of the use of gas for industrial and house-heating purposes in the state, it was declared.

The bill, introduced by Senator C. W. Baker, was passed as a state school relief measure. He asserted it would yield $4,000,000 annually. He also asserted it would benefit the coal industry.

Engineers of the Illinois Commerce Commission estimate that the tax would increase the house-heating rate from 7 cents a therm at present to 8½ cents a therm. Some authorities insist the gas companies will be unable to operate on present household rates if they should lose their industrial and house-heating business which would happen if the bill became a law.

PETITION FOR MUNICIPAL PLANT

KANSAS CITY, Mo., Apr. 2.—An initiative petition, calling for a city election to authorize the building of a municipally owned natural gas distributing system, was presented at the office of the city clerk. The petition contained 7,600 names, its sponsors said. H. F. McElroy, city manager, briefly inspected the petition, but made no comment. According to members of the committee, the informal application was given semi-official status by the state PWA engineer's office at St. Louis, pending the filing of an official application on behalf of Kansas City.

Distribution Conference of A.G.A. Detroit Program

The eleventh annual distribution conference of the American Gas Association will be held at the Book-Cadillac Hotel, Detroit, Mich., April 9-10.

The distribution committee follows: H. W. Battin, chairman, United Gas Improvement Co., Philadelphia, Pa.; Erick Larson, vice chairman, Long Island Lighting Co., Bay Shore, Long Island, N. Y.; C. A. Harrison, ex-officio, H. L. Doherty & Co., New York; J. H. Braine, Brooklyn Union Gas Co., Brooklyn, N. Y.; G. H. Boyd, Consolidated Gas Co. of New York; E. A. Clark, Manufacturers Light & Heat Co., Pittsburgh, Pa.; L. H. East, Rochester Gas & Electric Corp., Rochester, N. Y.; F. M. Goodwin, Boston Consolidated Gas Co., Boston, Mass.; D. P. Hartson, Equitable Gas Co., Pittsburgh, Pa.; F. A. Lydecker, Public Service Electric & Gas Co., Newark, N. J.; M. I. Mix, Peoples Gas Light & Coke Co., Chicago; C. C. Simpson, Consolidated Gas Co. of New York, and C. H. Waring, Kansas City Gas Co., Kansas City, Mo.

Among the reports and papers to be read Tuesday afternoon will be: Report of subcommittee on pipe coatings and corrosion, by George H. Boyd, chairman, Consolidated Gas Co. of New York; paper, "Corrosion Survey for Pipe Lines and Distribution Systems," by Dr. Scott Ewing, research associate, U. S. Bureau of Standards; report of subcommittee on pipe joints, by C. H. Waring, chairman, Kansas City Gas Co.; paper, "Corrosion of Bolts on Pipe Joints," by J. A. Perry, United Gas Improvement Co., Philadelphia, Pa.; paper, "Distribution of Gasket Pressures in Pipe Joints and Clamps," by George H. Pfefferle, S. R. Dresser Manufacturing Co., Bradford, Pa.; report of subcommittee on cast iron pipe standards, by C. C. Simpson, chairman, Consolidated Gas Co. of New York.

MR. CORTELYOU HONORED

NEW YORK, Apr. 2.—A dinner for George B. Cortelyou was given at the Union Club by the officers of the Consolidated Gas Co. of New York in celebration of the twenty-fifth anniversary of his connection with the company. He is 72 years old.

Mr. Cortelyou became president of the company on March 25, 1909, two weeks after he had retired from the Secretaryship of the Treasury in the Theodore Roosevelt cabinet. He had served previously as the first Secretary of the Department of Commerce and Labor, and as Postmaster General. His political career in Washington began as fourth assistant Postmaster General under President Cleveland.

PUMPING STATION EXPLOSION

DUNNVILLE, Ontario, Apr. 2.—The pumping station of the Dominion Natural Gas Co., at Winger, was completely destroyed on March 26 as the result of explosion, followed by fire, with loss estimated at $60,000. Explosion was apparently due to backfiring of one of three gas engines. William P. Gray, manager of the plant, was severely burned.

SOUTHWEST GAS UTILITIES

A plan of reorganization for the Southwest Gas Utilities Corp. has been filed in chancery court of Wilmington, Del., by a committee of which Ronald M. Craigmyle, New York, is secretary. Chancellor J. O. Wolcott fixed April 9 for a hearing by which time creditors will have been given notice to enter objections to the plan, if they have any. The plan provides for the formation of a new corporation which would acquire collateral held by the Manufacturers Trust Co., and all free assets of the present company, which the new company believes are of value. The corporation serves communities in Oklahoma, Texas and Louisiana.

But One Bid Is Received for Western Service Corp.

Only one bid was presented at Guthrie, Okla., March 31, in the Federal receivership sale of the Western Service Corp. gas properties.

The bid, a minimum offer, was made by E. R. Bahan, who represented himself as an individual, at $250,000. Mr. Bahan said he was connected with the Eastern Gas & Electric Co. and the Albany Gas Co., both of Texas.

Mr. Bahan said if his bid is accepted the service company would be operated under its present management. Most of the city meters in Guthrie now are those of the Western Service, although the Guthrie Gas Co., subsidiary of the Lone Star Gas Co. of Texas, also operates in Guthrie.

In receiving the bid, Federal Judge Edgar S. Vaught overruled a petition of Western Service stockholders and others for further delay in the sale. The sale date twice previously had been postponed at the request of stockholders, who asked for more time to reorganize the concern, which has been in receivership two years.

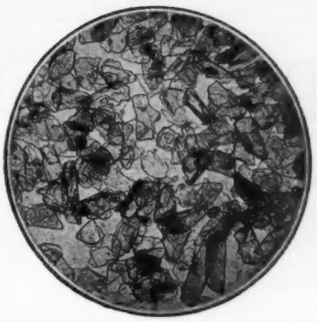
Negotiating for Gas in Anderson-Leon Counties

Officials of the Lone Star Gas Co. and Tide Water Oil Co. and Texas Seaboard Oil Co. are negotiating for sale of gas and connection to gas wells in the Long Lake area of southwest Anderson County, Texas, where the latter companies have a block of some 24,000 acres and four wells capable of making large amounts of sweet dry gas, with one other test about to be completed. Lone Star could readily use a supply of gas from this pool to supply the surrounding towns, and also for a potential supply for Fort Worth and Dallas if needed.

Officials for the gas company have also been negotiating with officials of Shell Petroleum Corp. for gas from the latter's three wells in the Buffalo area of Leon County, Texas. The nearest line of the gas company to the Leon County gas area terminates at Groesbeck in Limestone County. The nearest line to the Long Lake area is at Teague. Another line, near the Cayuga area of northwest Anderson County, runs from Dallas to Athens thence southwest to Kerens, not too distant from the Cayuga discovery. This area also has large gas producing potentialities and the Lone Star Gas Co. may also connect to wells in that field although some of the gas will be used for further drilling by the Tide Water Oil Co. and Texas Seaboard Oil Co., owners of the 15,000-acre block surrounding the discovery well in the Samuel Snider Survey.

HOME SERVICE CONFERENCE

The home service committee of the American Gas Association, whose chairman is Dorothy Shank, will hold its annual two-day conference in Chicago this year on Friday and Saturday, April 13 and 14.



Reproduction of the micrograph above shows the interlocking of the flakes of the internal reinforcement used by Barrett. By laminating with the waterproofing agent they give Barrett Pipe Enamels unusual toughness and resistance to soil stresses.

For pipe of large diameter, The Barrett Company will furnish equipment required to revolve pipe and spread enamel.

Built on 80 Years of Waterproofing Experience

Barrett Specification

PIPE LINE ENAMELS

Metal pipe will last years longer and have greater immunity to aging and corrosion when it is protected with Barrett Specification Pipe Line Enamels. Moisture-proof and not affected by earth acids. Barrett Specification Pipe Line Enamels are also non-conductors of electricity. They provide a smooth, tough film which gives extraordinary resistance to mechanical injury and to corrosion and electrolysis. Behind Barrett Specification Pipe Line Enamel stands eighty years of experience in the development and application of coal-tar protective coatings. Barrett offers the co-operation of its Technical Staff and the service of its Field Engineers for developing special protective coatings and efficient methods of application. 'Phone, wire or write for further information.

THE BARRETT COMPANY, 40 RECTOR STREET, NEW YORK, N. Y.

PERSONAL PARAGRAPHS

P. R. NAYLOR, of Denver, Colo., visited Lethbridge, Alberta, recently on business connected with the Maple Leaf refinery, of which he is an officer.

* * *

RALPH T. ZOOK, of the Planning and Co-ordination Committee, was in Oil City, Pa., recently to discuss conditions in the production regions south of Bradford, Pa.

* * *

D. A. ROBERTSON, in the land department of the Shell Petroleum Corporation, at Houston, Tex., has been transferred to the West Texas-New Mexico district, at San Angelo, Tex.

* * *

GEORGE KENT, formerly superintendent of the Humble Oil & Refining Company's gasoline plants in Texas, has resigned and taken a similar position with Hanlon-Buchanan, Inc.

* * *

ROBERT HEAL, of Petrolia, Ontario, who left recently for Persia in connection with a drilling contract was, before his departure, presented with a fountain pen and a complimentary address from the Petrolia Independent Order of Odd Fellows of which he has been conductor.

* * *

REX HAMAKER, vice president of Reed Roller Bit Company, Houston, Tex., has returned from a business trip to California.

* * *

RICHARD H. LACY and H. TANNEBAUM were recently re-elected vice president and secretary, respectively, of the Holly Development Company of California at the annual meeting.

* * *

E. McTOWAN, representing Western States Gasoline Company, of Los Angeles, Calif., has been selected by SECRETARY ICKES to succeed C. R. GALLAGHER as regional committeeman of the natural gasoline committee for the sixth regional district.

* * *

J. EDGAR PEW, executive vice president of the Sun Oil Company, Philadelphia, Pa., spent the past week in Texas. HARRY MAXWELL, with the same company, Philadelphia, was also a business visitor in the company's Dallas offices during the week.

* * *

E. C. SCURLOCK, who has represented the Cooper-Kellar Oil Company, marketer of petroleum products, in the middle western territory, has been made manager of the company's office at Minneapolis, Minn. Headquarters of the company are in Houston, Tex.

* * *

THOMAS C. GRISELL, executive secretary of the Pennsylvania Grade Crude Oil Association, accompanied by ARTHUR S. GOW, of the Curtis Publishing Company, left Oil City, Pa., for a three weeks' business trip to the Pacific Coast on April 1. They will hold a series of jobber meetings in Los Angeles, San Francisco and other cities.

* * *

H. A. RIKE, of El Dorado, Ark., and J. F. WARD, of Smackover, Ark., have returned from Chicago, where they purchased equipment for the new plant of the Rike Full Float Valve Corporation. Mr. Rike, for the past six years general superintendent of natural gasoline plants for the Simms Oil Company, has obtained patents on a valve.

H. W. MATHEWS, petroleum engineer for the California Company, has been transferred from Dallas to the Midland, Tex., office as district engineer.

* * *

JOHN GOSSETT, chief gauger for the Humble Oil & Refining Company in the East Texas division, is suffering from injuries received in an automobile accident.

* * *

W. G. HANRAHAN, who has been associated with the American Petroleum Institute in East Texas, has moved to Cisco, Tex., to enter the oil business as an independent operator.

* * *

FAYETTE B. DOW, executive secretary of the National Petroleum Association, was a visitor in Bradford, Pa., last week. Mr. Dow said that improvement is near in the refining end of the business.

* * *

DR. SIDNEY BORN, professor of petroleum research at the University of Tulsa, has just returned from a three weeks' inspection trip through refineries in Chicago, western Pennsylvania, New York and Montreal, Canada.

H. W. STALCUP, vice president of the Skelly Oil Company, Tulsa, was a business visitor to Fort Worth, Tex., attending a meeting of natural gasoline manufacturers.

* * *

J. B. WHEELER, general manager of the Leonard Petroleum Company, with headquarters in Washington, Pa., is inspecting company properties in the East Texas Field.

* * *

FRANK CHAMPION, sales manager of Byron Jackson Company, is leaving for New York where he will remain until May, en route to Venezuela and Argentine, South America.

* * *

HAROLD VANCE, consulting petroleum engineer and independent operator, who has been living in Kilgore, Tex., for the past three years, has moved to Abilene, Tex., to engage in the oil business in West Texas.

* * *

G. A. TOMPSON, purchasing agent of the Empire Companies, of Bartlesville, Okla., who has been in a hospital at Kansas City, Mo., for an intestinal operation, is reported convalescing. He is expecting to return home shortly.

* * *

E. H. GRISWOLD, chief engineer of the Continental Oil Company, Fort Worth, Tex., spent several days at Houston, Tex., on business.

* * *

RALPH WILCOX, drilling superintendent of the Anglo-Ecuadorian Oil Company, arrived in New York, March 27, on the Grace liner Santa Rita from Ecuador.

* * *

FRED H. BOWMAN, of the Pure Oil Company, Chicago, and MRS. BOWMAN returned to New York last week from a West Indies cruise of the Hamburg-American line.

* * *

E. J. GORMAN, in charge of the Twin State Oil Company, Tulsa, subsidiary of the Sun Oil Company, was a business visitor in the Sun Oil Company's Dallas, Tex., offices last week.

* * *

ROBERT THOMPSON, chief geologist for Danciger Oil & Refining Company, is in the Houston Ear, Eye, Nose and Throat Hospital undergoing treatment after a serious hemorrhage of the nose. He is recovering nicely.

* * *

A. O. WOLL, manager of the marine department of General Petroleum Corporation, and who entered the employ of Standard Oil Company of New York in 1910, has been elected to the directorate of Socony-Vacuum's Pacific Coast subsidiary.

* * *

JOHN M. CAMERON, assistant office manager of the Planning and Coordination Committee, Washington, D. C., and MISS LUCY JOHNSON, of Warrenton, Va., will be married in the near future, according to an announcement made in Washington.

* * *

ESBERN HANSON and JOHN BRUNN, Saginaw and Grayling, Mich.; WILLIAM H. HOEHN, GRANT L. COOK and ROBERT J. WAGNER, Detroit; FRANK ROYCE, Ann Arbor, and E. G. CHAPMAN, of Mount Pleasant, company geologist and vice president, have been added to the directors of McClanahan Oil Company, Mount Pleasant, Mich.

DO YOU REMEMBER?

From The Oil and Gas Journal Files

25 Years Ago

April 5, 1909

Shortage of pipe lines in the Oklahoma Field makes tank car shipments on a large scale necessary and the railroads have a hard time keeping the producers supplied with cars.

Invitations are out for the wedding of Robert Lee Blaffer of Houston, Tex., and Miss Sarah Campbell, at the home of the bride in Lampassas, Tex., on April 22. They will be at home in Houston after October 22.

J. R. Sharp, of the Producers Oil Co., and M. M. Doan, of the Sun Oil Co., are among interested operators in the Madill district, Oklahoma, where a 1,000-bbl. well has been completed at a depth of 500 feet.

20 Years Ago

April 9, 1914

An Oklahoma City negro found a can of nitroglycerin which had been hidden by a "shooter." The negro thought it was corn whiskey. He started to take a drink. Quickly he spat it out. Then he poured the contents of the can onto the ground and threw away the can. The negro still lives.

John J. Carter, of Titusville, Pa., president of the Carter Oil Co., a prominent concern in the Eastern fields, is a Tulsa visitor.

The Prairie Oil & Gas Co. will build a tank farm near the Cushing Field so that it will be able to handle more of the rapidly increasing production of that field. The Prairie company has reduced the price of crude 5 cents per barrel in Oklahoma and Kansas, making it $1 per barrel for all grades outside of Healdton. The Gulf and Texas companies promptly met the lower price.

Vinton Petroleum Co. brings in a 10,000-bbl. well in the Vinton Pool, in Louisiana. It is No. 1 Gray.

The deepest well ever drilled in Oklahoma is 101 Ranch Oil Co.'s No. 1 Primeaux, Section 4-25n-2e, south of Ponca City, Kay County. It was dry and abandoned at 3,754 feet. Showings of gas and oil were found on the way down. The test ended in a 5⅛-inch hole.

The late John Eaton, president of the Oil Well Supply Co., for many years, left an estate of $1,513,256.

10 Years Ago

April 3, 1924

A violent windstorm in north central Oklahoma destroyed hundreds of derricks and damaged other property. The Comar Oil Co. lost 102 rigs in the Tonkawa Field. Most of the derricks were light, wooden affairs at pumping wells.

Fred S. Rowe, well known Gulf Coast operator, dies in Houston, Tex. He was 57 years of age. He operated in the Eastern fields, then in Caney, Kansas, and Nowata, Oklahoma, and for the past 10 years in the Gulf Coast. Mrs. Rowe and one son, Vance, of Casper, Wyo., survive.

Robert C. Stitt, one of the earliest operators in the Lima Field, of Ohio, dies in Toledo, Ohio, aged 72 years.

John C. Bennett, for 17 years with Prairie Oil & Gas Co., has been made general superintendent of production by Skelly Oil Co.

E. L. DeGOLYER, geologist, New York City, has been visiting in Houston, Tex.

* * *

R. G. A. VAN der WOUDE, president of the Shell Union Oil Corporation, has gone to Europe on business.

* * *

H. R. KELLAR, Cooper-Kellar Oil Company, Houston, Tex., has returned from Minneapolis, Minn., where he spent several weeks at the company's office in that city.

* * *

PAUL FITZGERALD, of Mount Pleasant, geologist for Dowell, Inc., left last week for a three weeks' geological survey in the Turner Valley oil field in Alberta, Canada.

* * *

CHARLES L. SUHR, president of the Pennzoil Company and of the National Petroleum Association, is expected to return to Oil City, Pa., from Phoenix, Ariz., about April 7.

* * *

W. B. SHARP, president of Mission Manufacturing Company, Houston, Tex., has been making a several weeks' trip through the East, visiting Milwaukee, Akron and New York.

* * *

MAJ. STILES M. DECKER, administration member, national code authority, American Petroleum Equipment Industry and Trade, Houston, Tex., was a visitor in Tulsa last week.

* * *

B. L. MAJEWSKI, member of the Planning and Co-ordination Committee and an official of the Deep Rock Oil Corporation, broke two ribs in a fall on the ice as he was leaving the offices of the Petroleum Administrative Board in Washington recently.

* * *

F. A. YOUNG, sales manager, National Tube Company, St. Louis, Mo., spent several days in the Tulsa office of the company last week.

* * *

ARTHUR OLSON, of Tulsa, president of the Olson Oil Company, was host to a group of Sunflower state oil men last week in Wichita.

* * *

J. B. WHEELER, general manager of the Leonard Petroleum Company of Washington, Pa., has been on a tour of the Mid-Continent fields.

* * *

D. J. KREAGER, with the engineering department of the Continental Oil Company at Ponca City, Okla., has been transferred as resident engineer at the Continental refinery in Wichita Falls, Tex.

* * *

JIM FLAGG, investigator for the Department of the Interior, Tyler, Tex., was married to MISS SYBIL BOWLIN of Dallas, Tex., the past week and motored to Kansas City, Mo., for a honeymoon.

* * *

G. C. TERRY, special representative, Wall Rope Works, Inc., New York City, with headquarters in the Mid-Continent division office, Tulsa, is making an extended business trip through Arkansas, Louisiana and the Gulf Coast areas.

* * *

COMER PLUMMER, of Chicago, assistant to the vice president and general manager of production of the Pure Oil Company, was a visitor in Tulsa last week. He was formerly manager of the southwestern producing division.

* * *

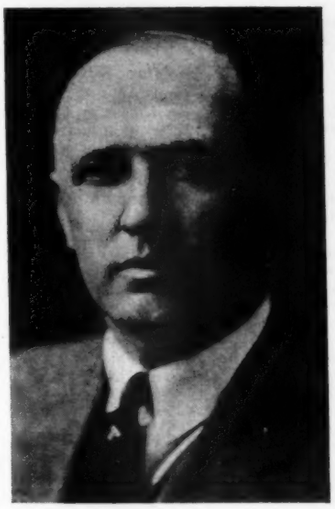
W. L. WALKER has been made factory reprsentative and distributor in the Mid-Continent for the American Fomon Company, of Philadelphia, Pa., manufacturer and distributor of fire protection equipment for refineries and oil country properties.

* * *

WALTER W. LARSH, of Wichita, Kans., has succeeded TOM ALLAN as district geologist in Kansas for the Stanolind Oil & Gas Company, following the promotion of Mr. Allan to the position of division geologist for Stanolind at Tulsa, with supervision over geological operations in Oklahoma, Kansas, Michigan and Louisiana. LEE CORNELL, scout for Stanolind in Kansas, will succeed Mr. Larsh.

One of the Industry's Busiest Men

One of the busiest men in the Texas-New Mexico division of the oil and gas industry is A. M. McCorkle, vice president of the Stanolind Oil & Gas Company in Fort Worth, Tex. Mr. McCorkle recently was named chairman of the Hobbs Pool (New Mexico) Proration Committee to fill the place left vacant by Fred A. Davies, formerly assistant manager in the southern district for the California Company who resigned the chairmanship upon being transferred to the Island of Bahrein as resident manager of the Bahrein Petroleum Company, Ltd.



A. M. McCORKLE

Mr. McCorkle first entered the oil industry in 1921 taking a position with the Dixie Oil Company, Inc., in Shreveport, La. He was made office manager, then in 1928 became vice president, secretary and treasurer and a director in the company. He was transferred to the Tulsa office of the company in 1929 in the same official capacity and when the Stanolind Oil & Gas Company was organized January 1, 1931, he was elected to the same position in that company, moving to Fort Worth in July, 1931, to take charge of the Texas-New Mexico division of the company.

Mr. McCorkle was born in 1884 in Grayson County, Texas. He had 20 years' railroad experience with several lines and before going in the oil business was with the Montezuma Copper Company in Nacazori, Sonora, Mexico. He is married and has one daughter.

J. R. FUNK, service representative, Landis Machine Company, Waynesboro, Pa., was in Tulsa last week.

* * *

W. A. JACKMAN, representing the Henry Vogt Machine Company, Louisville, Ky., was in Tulsa last week.

* * *

FRED A. GUSTAFSON, president of Gustafson Brothers, lubricating oil jobbers of Chicago, was in Oil City, Pa., on business last week.

* * *

D. E. BUCHANAN, vice president of Hanlon-Buchanan, Inc., Tulsa, was a business visitor to Fort Worth, Tex., during the past week.

* * *

GEORGE S. WALDEN, vice president of the Standard Vacuum Oil Company, left New York City, March 31, on the Rex of the Italian line for European points.

* * *

BEN C. BELT, chief geologist for Gulf Production Company, Houston, Tex., is recuperating in a Houston hospital from injuries received in an automobile accident in which he suffered a broken right arm, three broken ribs, a broken finger, a broken toe and head lacerations.

* * *

C. R. MUSGRAVE, Phillips Petroleum Copmany vice president, has been elected president of the Traffic Club of Bartlesville, Okla., organized recently with 20 charter members. HAROLD DUNCAN, Indian Territory Illuminating Oil Company traffic manager, is vice president and E. C. KITCHING, Phillips traffic manager, is secretary-treasurer. C. J. RUSK, Empire Gas & Fuel Company, is a director.

* * *

J. PAUL GETTY, prominent California operator and holding a substantial stock interest in Tide Water Associated, and GEORGE MACHRIS, president of Wilshire Oil Company of California, have purchased new yachts. Mr. Getty has purchased the 170-foot, twin-screw Diesel yacht, Jezebel, now in New York, while Mr. Machris has just taken delivery of the Blue Peter, a 96-foot Diesel yacht recently constructed at Seattle. Mr. Getty will dispose of his present 100-foot yacht, the Sobre Las Olas, upon the arrival of his cruiser.

"PETE" WOLTZ, Hinderliter Tool Company, was transferred by his company April 1 from Odessa to Pampa, Tex.

* * *

W. S. FARISH, chairman of the board of the Standard Oil Company (New Jersey), has gone to Europe on a brief business trip.

* * *

JAY F. VANDEVENTER, executive vice president of the Pennzoil Company, Oil City, Pa., has returned to his desk after several weeks' illness.

* * *

ROBERT H. OWEN, of the International Petroleum Company, arrived in New York, Saturday, from South America on the Santa Barbara of the Grace line.

* * *

W. N. FINNEGAN, chief statistician and assistant to the president of the Humble Oil & Refining Company, Houston, Tex., has returned from an extended trip in the East.

* * *

JOHN D. ROCKEFELLER, JR., and MRS. ROCKEFELLER left Saturday on a two months' trip to European points. They will spend the greater part of the time in Italy.

* * *

L. W. MacNAUGHTON, chief geologist, Gulf Coast division, Amerada Petroleum Corporation, was the principal speaker at the last regular meeting of the Houston Geological Society.

* * *

WILLIAM GROUNDWATER, director of transportation of the Union Oil Company of California, has returned to the home office following an absence of a few weeks during which he attended a conference in the East.

* * *

R. B. ELLISON, president of the Stanolind Pipe Line Company, is in Colorado Springs, Colo., where he was called by the serious illness of his mother.

* * *

FRANK BRINEGAR, vice president, Continental Supply Company, Dallas, Tex., attended the sessions of the Petroleum Equipment Suppliers organization in Tulsa last week.

* * *

JOHN L. MURPHY, president Murphy Oil Company, Philadelphia, Pa., was visiting his oil properties in East Texas, Kansas and Oklahoma and spent March 29 in Tulsa.

* * *

L. J. MAILHUS, office manager, and ED FLOWERS, district manager, Lincoln Tank Company, are now in charge of the Big Spring, Texas, district, transferred from Shreveport, La.

* * *

JOHN A. FROST, of Farmington, N. Mex., representing the U. S. Geological Survey in northwestern New Mexico, was in the hospital for three weeks, following an appendix operation. He has since been removed to his home and is recovering.

* * *

B. A. (BART) MYERS, superintendent of drilling operations for the Imperial Oil Company, Toronto, Canada, was a visitor in Casper, Wyo., recently. Mr. Myers formerly had charge of the operations of the Carter Oil Company in Wyoming. Until last year he was in charge of operations for the Imperial Oil Company in Colombia, South America. He now is in charge of all production and drilling for the Imperial company.

* * *

JOHN HARRIS, of Bartlesville, Okla., manager of the oil pipe line department of the Phillips Petroleum Company; H. L. McQUISTON, of Oklahoma City, Okla., division production superintendent; REX McILROY, of Borger, Tex., manager of the Panhandle gasoline department; A. H. RONEY, of Bartlesville, chief engineer; C. P. DIMIT, of Bartlesville, vice president in charge of production; C. A. DANIELS, of Borger, production superintendent for the Panhandle; FRED GLEASON, of Bartlesville, manager of the natural gasoline department, R. C. JOPLING, and GEORGE P. BUNN, of Bartlesville, of the public relations department, made a tour of the Texas Panhandle last week.

Gasoline Market in Chicago Territory Is Now Showing Signs of Stabilization

BY SPECIAL CORRESPONDENT

CHICAGO, Apr. 2.—After an extended period of nervousness, the tank car gasoline market here at the opening of the week gave added indication that it might be stabilizing, perhaps in preparation for the price improvement which is being predicted in many quarters. Tone was better and a much more cheerful attitude is noticeable in the market centers.

Ruling prices are more firmly established and low octane motor gasoline around 3¼ cents is now regarded as being a more nearly attractive purchase by the trade. Still, jobber buying is not especially active, for jobbers do not seem disposed yet to anticipate their needs.

Rumors of Pool Buying

Reports here are that large-scale pool buying may be expected soon and this is exciting interest. There is still sufficient gasoline available to buyers to keep the current buying rate well supplied, but the weakest elements have disappeared for the present. At the same time contract orders are reaching good rates, with shipping instructions being forwarded from various sections. Jobber stocks still appear rather limited, and they do not wish to run dry. Actual consumption totals still seem to be making good comparison with a year earlier.

The extent and nature of tank wagon and service station price cuts over the Middle West are a source of worry to major companies and jobbers also are upset. All kinds of cuts and concessions are being made. Jobbers are forwarding reports of alleged violations of various sections of the code in large numbers, and some of them assert their competitors simply are ignoring the existence of a code in any form. It is hoped that a firming of the tank car market will be sufficient to correct automatically many of these difficulties as to retail price and general market irregularities.

Many Local Cuts

The 1-cent to 1½-cent cut in Chicago the last week is a reflection of the policy which major companies appear to be using in meeting the situation. They are hesitant to make general changes over the territory and are merely adjusting local prices where it is inescapable. Reductions from normal are now ruling in many points. Jobbers' margins are still further increased where they are using stabilized natural gasoline, which is ruling at low prices.

Kerosene

A feature of the oil markets is the strength in tank car kerosene. Farmers are beginning to get into their fields and the number of tractors to be used is expected to be large. Prices are not much changed but the material is becoming firmer.

Furnace Oils

This is having some influence on the furnace oils, which are relatively steady for this time of year. Consumption is holding up fairly well under the influence of fairly low temperatures. Production of distillates and zero gas and fuel oils has been greatly reduced and stocks are well in hand.

Heavy Fuels

A persistently good demand and strengthening prices are features of the heavy fuels and gas oils. Industrial consumers are keeping the market well cleaned up of material which they can use, and refiners are also competing for anything which they can find for cracking stock. Buyers are scouring the market for additional material, with the outlook for a continued high crude market.

Lubricants

Lubricants are quiet and show little price change in this region. Neither jobber nor compounder participation in the market is of striking proportions, but the market is firm.

Naphthas, Solvents

Naphthas and solvents are marking time so far as changes or market movements are concerned. Comparatively little additional business is coming in.

Wax

A firm position is being maintained by wax, with prices steady. Inquiries are still reaching sellers in good number and the statistical situation is reported strong.

Petroleum Coke

Little or no change is reported in petroleum coke. The last season has been a relatively good one for consumption and the price structure is holding firm to reflect it.

Crude Oil Prices

(Continued from Page 35)

Effective September 29 in Salt Flat by Shell Petroleum Corp.

Rocky Mountain States

Iles, light (Sept. 29, 1933)	$.96
Iles, heavy (Sept. 29, 1933)	.90
Florence, Colo. (June 17, 1933)	.30
Fort Collins and Wellington, Colo. (June 17)	(See Salt Creek prices)
Big Muddy (Sept. 29, 1933)	1.01
Frannie, light (Sept. 29, 1933)	.87
Frannie, heavy (Sept. 29, 1933)	.62
Salt Creek and LaBarge (Sept. 9, 1933)	See Stanolind Mid-Continent price schedule
Grass Creek, light (Sept. 29, 1933)	1.18
Grass Creek, heavy (Dec. 15, 1932)	.45
Elk Basin (Sept. 29, 1933)	1.18
Rock Creek (Sept. 29, 1933)	1.02
Dutton Creek (July 8, 1933)	See Mid-Continent gravity prices
Lance Creek (Dec. 16, 1932)	.92
Poison Spider (Mar. 5, 1931)	.70
Hudson (June 2, 1931)	.65
Lander (Mar. 5, 1931)	.40
Rex Lake (Feb. 22, 1930)	1.10
Osage	1.08
Lost Soldier (Sept. 30, 1933)	.88
Hamilton Dome (Dec. 16, 1932)	.25
Torchlight (Sept. 29, 1933)	1.18
Greybull (Sept. 29, 1933)	1.18
Pondera	1.15
Sunburst (Sept. 29, 1933)	1.35
Cat Creek, Montana	1.07
Hogback (Sept. 29, 1933)	1.11
Lea County, N. Mex. (Sept. 29, 1933)	.75
Maljamar (Sept. 29, 1933)	.70
Artesia-Jackson (Dec. 1, 1933)*	.75

Note—Salt Creek, Torchlight, Elk Basin, Grass Creek, Frannie, Greybull, Hogback and Iles by Stanolind Oil & Gas Co. Elk Basin, Grass Creek light, Big Muddy, Rock Creek and Sunburst by Ohio Oil Co. Lost Soldier posted by Producers & Refiners Corp. Artesia, Jackson and Maljamar posted by Continental Oil Co. Lea County, effective September 29, 1933, by Humble Oil & Refining Co. and other buyers; Fort Collins, Wellington, Orchard, Florence, Big Muddy, Cat Creek, Rattlesnake and Table Mesa by Continental Oil Co. Osage posted by Arro.

*Continental Oil Co.

North Louisiana and Arkansas

Smackover, Ark. (all grades)	$.70
Tullos-Urania, La. (Jan. 13, 1934)	.87
Nevada, Ark. (Sept. 29, 1933)	.60
East El Dorado (Sept. 29, 1933)	.70
Other fields	(See gravity table)

Note—Smackover: Effective September 29, 1933, Texas Co., Magnolia Petroleum Co., Standard of Louisiana, Louisiana Oil Refining Corp., Gulf Refining Co. and Phillips Petroleum Co. East El Dorado posted by Magnolia Petroleum Co. and Gulf Refining Co., Nevada by Standard Oil Co. of Louisiana. Urania posted by H. L. Hunt, Inc., and Louisiana Oil Refining Co.

Eastern States

TIDE WATER PIPE CO.
(Effective October 4, 1933)

Bradford, Pa.	$2.45
Allegany, N. Y.	2.45

SOUTH PENN OIL CO.
(Effective October 4, 1933)

Pennsylvania Grade Oil in National Transit Lines (Bradford Field)	$2.45
Pennsylvania Grade Oil in Southwest Pennsylvania Lines	2.12
Pennsylvania Grade Oil in Eureka Pipe Line lines	2.07
Pennsylvania Grade Oil in Buckeye Pipe Line lines (Jan. 29, 1934)	1.97
Corning Grade Oil in Buckeye Pipe Line Co.'s lines (Oct. 2, 1933)	1.32

PENNZOIL CO.
(Effective October 4, 1933)

Pennsylvania Grade Oil in National Transit Lines:	
Group A (Includes Cochran, Franklin, Hamilton and Doolittle districts.)	$2.37
Group B (Includes Titusville district.)	2.36
Group C (Includes Turkey and Tidioute districts.)	2.35
Group D (Includes Bear Creek and Porkey districts.)	2.34
Group E (Includes Eldeneau, Bull Creek, Rough Run, Carbon, Dipner, Bredin, McJunkin, Jameson Kennerdell, Emlenton, Tiona, Lacy and Kinzua districts.)	2.32
Price depends on length of pipe line haul to plant at Oil City.	

PURE OIL CO.
(Effective October 4, 1933)

Cabin Creek, W. Va.	$2.07
Bradford Hollow, W. Va.	2.07
Kelly Creek, W. Va.	2.07

Middle Western States

OHIO OIL CO.
(Effective September 29, 1933)

Lima	$1.30
Illinois (Jan. 5, 1934)	1.13
Princeton, Ind. (Jan. 5, 1934)	1.13
Plymouth	Shut in
Western Kentucky	1.18
Midland, Mich. (Sept. 30, 1933)*	1.02
Oceana, Mich. (Oct. 5, 1933)	.90
Somerset, Ky. (Sept. 30, 1933)	1.23
Hart County, Ky. (Oct. 1, 1932)	1.18

*Posted by Pure Oil Co. Producers Pipe Line Co. pays 5 cents per barrel over Pure Oil Co.'s posted price. Somerset, Ky., crude purchased by Ashland Refining Co., Ashland, Ky., and posted price includes premium. Hart County, Kentucky, crude purchased by Stoll Refining Co. Oceana posted by Old Dutch Refining Co. and Naph-Sol Refining Co.

Canada

Ontario (September 9, 1933):	
Petrolia*	$2.10
Oil Springs	2.17
Turner Valley (Mar. 5, 1934):†	
Clear naphtha	$2.87
Discolored naphtha	2.63
Crude oil, 50 gravity	2.44
Crude oil, 45 to 49.9	2.07
Crude oil, 40 to 44.9	1.50

*Imperial Oil, Ltd. †Imperial Oil, Ltd., and Regal Oil & Refining Co.

Mexico

Panuco*	$.72

*F.o.b. ship, based on December transactions and exclusive of production and export taxes and bar dues.

California Crude Oil Prices

STANDARD OIL CO OF CALIFORNIA
(Effective September 6, 1933)
For current purchases of crude oil at the well (unless otherwise specified). (All gravities above those quoted take highest price offered in that field.)

Gravity—	Long Beach	Seal Beach, Alamitos Heights	Huntington Beach	Inglewood	Playa del Rey	Olinda, Brea Canyon	Athens-Rosecrans	Torrance	Richfield	Whittier, La Habra	Montebello	Santa Fe Springs	La Habra-Coyote	Midway-Sunset, Elk Hills, Buena Vista Hills	Lost Hills	Coalinga	Coyote
offered in that field.)																	
14-14.9	$.65	$.65	$.65	$.65	$.65	$.65	....	$.65	$.65	$.65	$.65	....	$.65	$.57	$.57	$.57	$.65
15-15.9	.65	.65	.69	.69	.66	.69	....	.66	.65	.65	.65	....	.65	....	....	....	.65
16-16.9	.66	.65	.72	.73	.69	.73	....	.69	.67	.68	.65	....	.65	....	....	....	.65
17-17.9	.69	.65	.75	.76	.73	.76	....	.72	.70	.71	.65	....	.68	....	....	....	.68
18-18.9	.72	.65	.78	.80	.76	.79	....	.75	.74	.74	.65	....	.71	.61	.61	.59	.71
19-19.9	.75	.65	.81	.83	.80	.82	....	.78	.78	.78	.65	....	.74	.64	.65	.62	.74
20-20.9	.78	.68	.83	.87	.83	.85	....	.81	.82	.81	.66	....	.78	.67	.69	.65	.78
21-21.9	.81	.72	.86	.90	.87	.88	....	.83	.85	.84	.69	$.72	.81	.70	.73	.68	.81
22-22.9	.84	.76	.89	.94	.90	.92	....	.85	.89	.87	.72	.76	.84	.73	.76	.72	.84
23-23.9	.88	.81	.92	.97	.94	.95	$.83	.89	.93	.90	.76	.79	.87	.77	.79	.75	.87
24-24.9	.91	.85	.95	1.01	.97	.98	.86	.92	.97	.93	.80	.83	.90	.81	.82	.78	.90
25-25.9	.94	.89	.98	....	1.00	1.01	.90	.95	1.00	....	.85	.87	.93	.85	.85	.81	.93
26-26.9	.97	.93	1.01	....	1.04	1.04	.94	.98	1.04	....	.99	.90	.96	.89	.88	....	.96
27-27.9	1.00	.98	1.04	....	....	1.07	.97	....	1.08	....	....	.94	.99	.93	.91	....	.99
28-28.9	1.03	1.02	1.07	....	....	1.10	1.01	....	1.11	....	....	.98	1.02	.97	.94	....	1.02
29-29.9	1.06	1.05	1.09	....	....	....	1.04	....	1.15	....	....	1.01	1.05	1.01	.97	....	1.06
30-30.9	1.09	1.10	1.12	....	....	....	1.08	....	....	....	....	1.05	1.09	1.05	1.00	....	1.09
31-31.9	....	....	....	....	....	....	1.12	....	....	....	....	1.08	1.12	1.09	....	....	1.12
32-32.9	....	....	....	....	....	....	1.15	....	....	....	....	1.12	1.15	1.13	....	....	1.15
33-33.9	....	....	....	....	....	....	....	....	....	....	....	1.16	1.18	1.17	....	....	1.18
34-34.9	....	....	....	....	....	....	....	....	....	....	....	1.19	1.21	....	....	....	1.21
35-35.9	....	....	....	....	....	....	....	....	....	....	....	1.23	....	....	....	....	....
36-36.9	....	....	....	....	....	....	....	....	....	....	....	1.26	....	....	....	....	....
37-37.9	....	....	....	....	....	....	....	....	....	....	....	1.30	....	....	....	....	....
38-38.9	....	....	....	....	....	....	....	....	....	....	....	1.34	....	....	....	....	....

Additional Standard Oil Quotations

Elwood Terrace—F.o.b. ship, 33 degrees, $1.03; 34 degrees, $1.06; 35-35.9, $1.09; 36-36.9, $1.12; 37 degrees and over 1.15.
Newhall—14 degrees and over, 57 cents.
McKittrick and Kern River—14 degrees and over, 57 cents.
Wheeler Ridge—14 to 17.9 degrees, 57 cents; 18-18.9, 58 cents; 19-19.9, 61 cents; 20-20.9, 64 cents; 21-21.9, 67 cents; 22-22.9, 70 cents; 23-23.9, 73 cents; 24-24.9, 76 cents; 25 degrees and over, 79 cents.
Kettleman Hills—33-33.9 degrees, 93 cents; 34-34.9, 96 cents; 35-35.9, 99 cents; 36-36.9, $1.02; 37-37.9, $1.05; 38-38.9, $1.08; 39 degrees and over, $1.11.
The Texas Co. posted in Shiells Canyon, South Mountain and Santa Paula as follows: 14 to 17.9, 57 cents; 3 cents added for each degree up to and including 26-26.9 degrees at 84 cents; then 4 cents added for each degree up to and including 30 degrees and over at $1. Company posts Standard Oil Co.'s Montebello prices in Montebello and North Whittier, and posts Standard Oil Co. prices in Signal Hill, Alamitos Heights, Huntington Beach, Torrance, Richfield and Santa Fe Springs, all effective September 6.
General Petroleum Co. posts Standard Oil Co. prices in Athens, Rosecrans and Signal Hill; Alamitos Heights up to 26-26.9; Santa Fe Springs up to 35-35.9; Richfield up to 25-25.9; Brea Canyon and Olinda up to 25-25.9, and Torrance up to 25-25.9.
Union Oil Co., effective September 6, posts same price as Standard Oil Co. in all fields in which both purchase, excepting that in Athens-Rosecrans, Union Oil Co. posts 21-21.9, 72 cents, and 33-33.9, $1.18; 34-34.9, $1.21, and 35-35.9, $1.24.
Associated Oil Co., effective September 6, posted same prices for the same grades as Standard Oil Co. of California, excepting that in some fields its gravity scale stops as follows: Huntington Beach, 26 degrees and over; Seal Beach and Alamitos Heights, 26 degrees and over; Coyote Hills, 23 degrees and over; Richfield, 25 degrees and over; Torrance, 25 degrees and over; Inglewood, 24 degrees and over; Santa Fe Springs, 35 degrees and over; Midway-Sunset, Elk Hills, Buena Vista Hills, 30 degrees and over. Also Associated pays 52 cents for oil of 11 to 13.9 gravity in McKittrick, Kern Front, Kern River, Midway-Sunset, Elk Hills, Buena Vista Hills and Coalinga.

Kansas Fields

(Continued from Page 65)

Hill, SW cor. NE Section 14-13-14w, is a rig on the ground.

Alma Petroleum Co.'s No. 1 Rhodes, C SW SW Section 14-11-23w, is a wildcat rig.

Ellsworth County

Hartman and others' No. 1 Orth, SW cor. NW Section 15-16-10w, Ellsworth County, was given a shot and also treated with acid and has been abandoned at a total depth of 3,449 feet.

C. L. Price and others' No. 1 Erlich, NW cor. SE Section 10-16-13w, a wildcat, is a location.

Russell County

J. J. Hall and others' No. 1 Miller, NW cor. NE NE Section 31-13-13w, Russell County, was completed on the pump for 80 bbls. a day from the total depth of 2,975 feet.

Muth Brothers' No. 1 Mills, SW cor. Section 10-14-15w, is a rig on the ground.

Signal Oil Co.'s No. 1 Foster, SE cor. Section 26-15-13w, is a rig on the ground.

Rice County

Ramsey and others' No. 1 Johnson, on the Chase townsite, 80 feet south and 240 feet east of the NE SE Section 32-19-9w, Rice County, was abandoned as a dry hole at a total depth of 3,301 feet.

Deitrick and others' No. 1 Fitzpatrick, C NE NE Section 30-21-8w, was spudding.

Garden and others' No. 1 McCracken, NE cor. Section 10-21-7w, is a cellar.

Gypsy Oil Co.'s No. 3 Malone, NW cor. SE NW Section 18-20-9w, is a rig.

Werbros and others' No. 1 Masemore, NE cor. SW NW Section 18-20-9w, is a rig.

Keith and others' No. 1 Grove, SE cor. NW Section 29-19-9w, is a rig on the ground.

Ramsey and others' No. 3 Smith Community, SE cor. NE NE SE Section 31-19-9w, was spudding. Same operators' No. 1 Lansing, NE cor. NW SW NW Section 32-19-9w, is a rig.

Eldorado Refining Co. and others' No. 8 Stratman, NW cor. SE SE Section 1-17-10w, is a rig on the ground.

Butler County

Cromwell & Lewis' No. 1 Yetter (twin), NW cor. NE SE Section 6-28-6, Butler County, was completed as a dry hole after finding water in the Kansas City lime at 2,148-55 feet.

Blakesly & Wentz' No. 1 Beadles, NW cor. SW NE SE Section 5-27-6 (old well drilled deeper), was completed for 15 bbls. a day after being treated with acid. Pay was found from 3,015-3,118 feet. Total depth was 3,125 feet.

Cosmic Oil Co.'s No. 1 Loomis, NW cor. SW NW Section 15-27-4, was drilling at 400 feet.

Penwest Oil & Gas Co. and others' No. 1 Ralston-Wilson, NW cor. NE NE SW Section 36-25-4, was a rig moving in.

Stafford County

The wildcat test of Vickers Petroleum Co. and Phillips Petroleum Co. makes a flow every 14 hours. The well is No. 1 Cravens, SW cor. NE Section 15-25-11w, Stafford County. The hole filled with oil from the Viola lime at 3,920-21 feet in two hours. Tanks were being erected to make a production test.

Stanolind Oil & Gas Co.'s No. 3 Allen, SE cor. NW SW Section 31-22-11w, Stafford County, pumped 895 bbls. of oil in 24 hours on a potential test and was completed. It is producing from the Siliceous lime at 3,535-78 feet. Same company's No. 4 Allen, NW cor. SE SW Section 31-22-11w, was a rig on the ground.

Kingman County

Skelly Oil Co.'s No. 4 Miles, 440 feet north and 1,499 feet west of the SE cor. Section 19-27-10w, Kingman County, flowed 458 bbls. of oil in 24 hours and was completed. Same company's No. 3 Ratcliff, 440 feet south and 1,289 feet east of the NW cor. Section 30-27-10w, flowed 414 bbls. a day on a potential test from the Lansing lime at 3,405-78 feet and was completed. Same company's No. 4 Leisman, SE cor. NE NW Section 29-27-10w, was drilling at 285 feet.

Coffey County

Aikman and Barker's No. 1 Todd, SE cor. NE NW Section 2-22-13, Coffey County, was completed for 8 bbls. a day on the pump from sand at 1,789-1,820 feet.

Simmons & Rhodes' No. 2 Blanck, NW cor. SW NW Section 33-22-13, was abandoned as a dry hole at a total depth of 1,909 feet.

Elk County

Minnehoma Oil Co.'s No. 4 Ferguson, NE cor. NW SW Section 3-31-8, Elk County, pumped 156 bbls. of oil in 24 hours from the Kansas City lime at 1,-938-59 feet.

Denton & Morrow's No. 1 Elstun, SW cor. SE SW NW Section 15-31-10, was estimated to be making 10 bbls. a day after being treated with acid at 1,994-2,000 feet. It was completed.

Barker-Morgan and others' No. 3 Ferguson, SW cor. SE NW Section 23-30-8, an old well drilling deeper, was rigging up. The old total depth was 1,968 feet.

Osborne and others' No. 1 Marrs, SW cor. NE Section 27-29-10, was a rig moving in.

Sedgwick County

The first test offsetting the wildcat well southwest of Wichita, is D. Lauck's No. 1 Gillespie, NE cor. SE SW Section 6-28-1w, Sedgwick County. It is a rig, and the west offset. The discovery well drilled by the same operator opens a new producing territory. It filled up with a hole full of oil in 20 minutes from the Wilcox sand at 3,652-53 feet. A production test will be made in a few days.

Woodson County

Pure Oil Co.'s No. 16 Winterscheid, C S half SW NE Section 6-24-14, Woodson County, has been completed for 100 bbls. a day after being treated with acid from pay at 1,700-24 feet.

OKO Oil Co.'s No. 6 Winterscheid, NE cor. NW SE Section 6-24-14, was completed on the pump for 40 bbls. a day from 1,715-29 feet. It was also treated with acid.

Brinegar and others' No. 1 Wells, NE cor. SE SE Section 30-25-14, was abandoned as a dry hole at a total depth of 1,535 feet.

Sheedy and others' No. 3 Akins, SE cor. NE SW Section 19-25-14, was drilling at 750 feet.

Greenwood County

Polhamus and Selby Oil & Gas Co.'s No. 2 Smith, 760 feet north and 1,110 feet west of the SE NE Section 6-24-12, Greenwood County, was completed making 30 bbls. a day on the pump. It was shot from 1,703-30 feet.

Matthews & Rex's No. 5 Wilson, 220 feet north and 920 feet west of the C Section 8-24-12, was swabbing 50 bbls. a day from sand at 1,714-35 feet.

Marion County

Harwood Oil Co. and Franco-Central Oil Co.'s No. 2 Cowman, SW cor. NE SW Section 11-17-4, Marion County, is a rig.

Cowley County

The reports from Cowley County show that three dry holes were completed during the week. Van Meter and others' No. 1 Brooks, SW cor. Section 5-33-3, found the Siliceous lime at 3,504-35 feet where it was abandoned as a dry hole.

The wildcat test of E. Yarnell and others' No. 1 Speer, SE cor. NE NE Section 31-33-6, found a hole full of water at 2,210 feet and was abandoned.

On the Winfield townsite, Slocum & Ebemyer's No. 1 Mayrs (Lot 9, Block 10), SW cor. NE SW SW Section 22-32-6, found water in the Siliceous lime at 3,355-70 feet and was abandoned.

Chautauqua County

El Bar Oil Co.'s No. 4 Julian, NW cor. SE NW Section 12-32-10, Chautauqua County, flowed 10 bbls. a day from the Mississippi lime at 1,998-2,054 feet. It was completed.

IMPORTANT BOOKS
for the Oil Man's Library

"ACCOUNTING FOR THE PETROLEUM INDUSTRY"

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Gulf Coast Fields and Wildcats

(Continued from Page 74)

BARBERS HILL—CHAMBERS COUNTY

Mills Bennett Prod. Co.'s No. 1-D Barber, 78 ft. S, 65 ft. W of NE cor. ..... Shale 4,792 ft.; cmtd. back to 3,754 ft.; top oil sand 3,873 ft.; T.S. 4,425 ft.; T.D. 4,441 ft.; cmtd. back to 4,370 ft.; set 36 ft. of 5-in. O.D. screen; making 900 bbls. .2% wash water, 26 gravity on ⅝-in. choke, 440 lbs.

Humble O. & R. Co.'s No. 5-B Kirby, Henry Griffith League, 928 ft. W of E line, 537 ft. N of S line of tract ..... Top salt 1,620 ft.; drlg. cmt. 3,966 ft.; to set whipstock.

McAlbert Oil Co.'s No. 3 Wilburn, Henry Griffith league ..... O.T.D. 5,317 ft.; T.D. 5,215 ft., sand; going in with fish tail 4,874 ft.

Sinclair Prairie Oil Co.'s No. 15 Wilburn, Henry Griffith League, 150 ft. W of No. 14 ..... Oil sand 4,830-70 ft.; swabbed fresh water; no oil; sidetracking, shale and lime, 4,220 ft.

Sinclair Prairie Oil Co.'s No. 17-A Wilburn, 150 ft. W of No. 13 ..... Rigging up.

Sun Oil Co.'s No. 15 Wilburn, 405 ft. from E, 50 ft. from W line ..... Shale 4,238 ft.

Sun Oil Co.'s No. 16 Wilburn fee, 120 ft. W of No. 15 and 40 ft. from N line of 20-acre tract in William Hodges Sur. ..... Drlg. rock 1,273 ft.; lost returns at 1,215 ft.

Sun Oil Co.'s No. 18 J. Wilburn, Henry Griffith League, 50 ft. N of S line, 50 ft. E of W line of lease ..... T.D. 4,524 ft.; P.B. 2,929 ft.; T.D. 4,470 ft. sand; T.S. 4,465 ft.; set 9⅝-in. csg. 4,444 ft.; sand showing oil 4,485 ft.; covering screen with rotary shoe at 4,466 ft.

Sun Oil Co.'s No. 21 J. Wilburn, Wm. Hodges Sur., 50 ft. N of No. 20 ..... Drlg. salt 1,556 ft.; top salt 1,396 ft.

Sun Oil Co.'s No. 4 Higgins, Wm. Hodges Sur., 100 ft. W of No. 2 ..... Drlg. salt 3,504 ft.

Superior Oil Corp.'s No. 3-A Barber (W.O.), Henry Griffith League ..... Base salt 3,195 ft.; T.S. 4,241 ft.; set 6⅝-in. csg. 4,087 ft.

Texas Gulf Prod. Co.'s No. 2 Barber, 514 ft. W, 41 ft. S of NE cor. of lease, Henry Griffith League ..... O.T.D. 4,309 ft.; underreaming 3,274 ft.

Texas Gulf Prod. Co.'s No. 2 Fitzgerald, 300 ft. from W and 80 ft. from S line of lease ..... Rigging up to work over; T.D. 5,258 ft.

Texas Gulf Prod. Co.'s No. 12-B Kirby, Henry Griffith League, 80 ft. S of N line and direct offset of Texas Gulf's No. 2 J. M. Fitzgerald ..... Top salt 1,375 ft.; drlg. shale and lime at 4,213 ft.; sandy shale, show oil 4,122 ft.

Texas Gulf Prod. Co.'s No. 8-H Kirby, 333 ft. W of No. 6-H, 70 ft. N of S line, Henry Griffith League (W.O.) ..... T.D. 5,024 ft.; sidetracked at 3,179-5,022 ft.; shot drill pipe at 2,750 ft.; waiting orders.

Texas Gulf Prod. Co.'s No. 4 Wilburn, Wm. Hodges Sur., 330 ft. N of S line, 50 ft. W of E line ..... Shale and lime 4,028 ft.; set 7-in. csg. 3,818 ft.; W.O.C.

Yount Lee Oil Co.'s No. 23 Chambers County, Wm. Bloodgood Sur., 116.9 ft. S of N line and 247 ft. W of E line ..... T.S. 1,449 ft.; sand showing oil 3,772 ft.; reaming; to set csg.

Yount Lee Oil Co.'s No. 7 Phillips, offset Sun Oil Co.'s No. 18 Wilburn ..... T.D. 4,477 ft., sand showing oil; set 26 ft. 5 9/16-in. O.D. screen; preparing to swab.

Yount Lee Oil Co.'s No. 8 Phillips, Wm. Hodges Sur. .... Derrick.

RABBS RIDGE—FORT BEND COUNTY

Humble O. & R. Co. and Gulf Prod. Co.'s No. 10-A George, 500 ft. E of No. 9-A in J. Rabb Sur. ..... T.D. 5,349 ft.; abnd.

Humble O. & R. Co. and Gulf Prod. Co.'s No. 11-A George, J. Rabb Sur., 741 ft. SE of No. 10 ..... Abandoned.

Humble O. & R. Co.'s No. 24-B Lockwood-Sharp, 1,153 ft. W of No. 18 ..... Drlg. shale 5,200 ft.

Humble O. & R. Co. and Gulf Prod. Co.'s No. 25-B Lockwood & Sharp, 2,882 ft. from E line and 376 ft. from N line of lease, J. Rabb Sur. ..... Derrick.

BIG CREEK—FORT BEND COUNTY

Porter et al's No. 2 Wheat ..... Odor oil 2,528-33 ft.; drlg.; T.D. 2,967 ft.; W.O.C.

C. & R. G. Drlg. Co.'s No. 1 Wheat ..... Top salt 3,865 ft.; drlg. 4,006 ft.; sand and salt 3,851-63 ft.; blew out and test killed; coring ahead.

LONG POINT—FORT BEND COUNTY

Oleson et al's No. 1 McFarland ..... T.D. 1,003 ft.; standing.

ORCHARD—FORT BEND COUNTY

Gulf Prod. Co.'s No. 39 Moore ..... Rigging up.

SUGARLAND—FORT BEND COUNTY

De Walt Oil Co.'s No. 1 Peterson ..... Top salt 4,512 ft.; T.D. 4,514 ft.; to plug back.

HIGH ISLAND—GALVESTON COUNTY

Yount Lee Oil Co.'s No. 4 Broussary & Orme, M. Dunman Sur., 129 ft. SW of No. 3 ..... Drlg. hard sand 4,529 ft.

Yount Lee Oil Co.'s No. 39 Cade, N. Fitzsimmons Sur., 1,000 ft. from W line, 580 ft. from S line of lease .... Drlg. shale 5,085 ft.; base salt 4,968 ft.

Yount Lee Oil Co.'s No. 40 Cade, 430 ft. NW of No. 2-B, 360 ft. from E line of lease and in line with No. 39 and No. 2-B, Fitzsimmons Sur. ..... Derrick.

Yount Lee Oil Co.'s No. 2-B Cade, 170 ft. from N line, 100 ft. from E line of 40-ac. lease, N. Fitzsimmons Sur. ..... T.D. 5,148 ft., sand and slate; top 5,053 ft.; set screen and swabbed dry; washing.

Yount Lee Oil Co.'s No. 2 Mathis, M. Dunman Sur., direct offset No. 1 Spencer ..... Drlg. hard sand and lime 2,489 ft.

Yount Lee Oil Co.'s No. 21 Smith, M. Dunman Sur., 360 ft. from W line, 1,485 ft. from N line of lease .. Drlg. hard sandy shale and lime 4,830 ft.

ARRIOLA—HARDIN COUNTY

Republic-Houston's No. 2-X Arriola fee ..... Derrick.

Republic-Houston's No. 7 Arriola fee ..... T.D. 1,352 ft., gumbo; W.O.C.

BATSON—HARDIN COUNTY

Danciger O. & R. Co.'s No. 2 Hooks, W. Donoho Sur., 330 ft. E of CWL, Blk. 24 ..... Coring shale and sand 4,720 ft.

SARATOGA—HARDIN COUNTY

Ernest Pope's No. 6 Patterson, 25 ft. from W line and 100 ft. from S line of Jordit Sur. ..... T.D. 1,250 ft.; comp. pumping 50 bbls.

Rio Bravo Oil Co.'s No. 98 Jordit, 150 ft. N and 50 ft. W of No. 104 on 128-ac. tract in Jordit Sur. ..... Rigging up.

Rio Bravo Oil Co.'s No. 107 Jordit, 910 ft. from W line and 50 ft. from N line of lease, 150 ft. N of No. 103.. Rigging up.

Selamo Oil Co.'s No. 1 Casewell, 940 ft. S of NW cor. and 600 ft. from E line, B.B.B.&C. Sur. ..... T.D. 3,212 ft.; shut down.

Skinner Oil Co.'s No. 3 Sessler ..... Rigging up.

SOUR LAKE—HARDIN COUNTY

Parr et al's No. 1 Benard, in W.C.R.R. Sur. No. 69 (west edge) ..... Top Dibollensis 6,885 ft.; T.S. showing oil 6,926 ft.; T.D. 6,994 ft.; set 7-in. at 6,886 ft.; W.O.C.

GOOSE CREEK—HARRIS COUNTY

Gulf Prod. Co.'s No. 13 St. Land Prod., 39 ft. from E line or 89.4 ft. W of Sun Oil Co.'s No. 1 McFarland, Wm. Scott Sur. No. 67 ..... Drlg. gumbo 642 ft.

Gulf Prod. Co.'s No. 23-A Wright, 50 ft. from N and W lines of NW cor. of Lot 8, A. A. Wright Subd., Wm. Scott Sur. No. 65 ..... Rigging up.

Hoffner & Moore's No. 1 A. A. Wright, 50 ft. N and 50 ft. E of SW cor. of Blk. 7, Wm. Scott Sur., Abst. No. 65 ..... Coring 4,500 ft.

Humble O. & R. Co.'s No. 79 Simms-Smith, Wm. Scott Sur., 50 ft. from N line, 150 ft. from W line of most southerly NW cor. ..... Drlg. shale 5,238 ft.

Miramar Oil Co.'s No. 1 Hughes ..... Drlg. 3,900 ft.

L. H. Puckett's No. 1 Scott, Wm. Scott Low League, 35 ft. from E line and 45 ft. from S line of 2½-acre tract ..... Rig up.

J. Simmons' No. 1 Kerwin Mitchell, SE cor. of 6-acre tract ..... Derrick.

HUMBLE—HARRIS COUNTY

Texas Co.'s No. 47 Stevenson, J. B. Stevenson Sur., 859 ft. E. 457 ft. S of NW cor., Lot 1-A ..... T.D. 2,732 ft.; sidetracking 2,652 ft.; brown shale.

MYKAWA—HARRIS COUNTY

Crown Central Pet. Co.'s No. 2 Minnetex Subd., 125 ft. from W line and 100 ft. from S line of Lot 251, Wm. J. Lovett Sur. ..... Set 7-in. at 4,797 ft.; T.D. sand and shale 4,860 ft.; preparing to pump.

Framer O. & G. Corp.'s No. 2 Minnetex Subd., 193 ft. NE of SW cor. of lease, Minnetex Subd., Wm. Lovett Sur. ..... Drlg. gumbo 616 ft.

PIERCE JUNCTION—HARRIS COUNTY

Rio Bravo Oil Co.'s No. 24-A Settegast, J. Kopman Sur. No. 44, 1,000 ft. S, 200 ft. W of NE cor. of "A" lease.. Drlg. 4,140 ft.

Rio Bravo Oil Co.'s No. 26-A Settegast, J. Kopman Sur. No. 44, 1,210 ft. N line, 750 ft. E line of "A" lease ..... Drlg. 6,056 ft.; sandy shale.

TOMBALL—HARRIS COUNTY

Amerada & Stanolind's No. 1 F. Rudel, 500 ft. from N line and 163 ft. from W line of W 30 acres of 80-acre tract in J. House Sur. No. 34 ..... Rigging up.

Humble O. & R. Co.'s No. 2 Emil Doege, C. Goodrich Sur., 300 ft. from E line, 466 ft. from S line of 90 acres ..... Drlg. shale 5,390 ft.

Humble O. & R. Co.'s No. 1 C. F. Hoffman, 1,900 ft. from S line and 466 ft. from E line of 123-acre tract, I.&G.N. Sur. No. 952 ..... Location.

Humble O. & R. Co.'s No. 2 Mary Jane Keuhn, 466 ft. from N line and 466 ft. from E line in W. Usner Sur. ..... Drlg. shale 953 ft.

Humble O. & R. Co.'s No. 2 J. W. H. Martens, Wm. Hard Sur. No. 877 ..... Drlg. sand and shale 3,853 ft.

Humble O. & R. Co.'s No. 2-B Quilter, A. Seneschal Sur., 466 ft. from E line and 3,946 ft. from N line of survey ..... Drlg. hard sand 5,567 ft.

Humble O. & R. Co.'s No. 1-C Hope Quilter, 660 ft. from N line and 330 ft. from W line of 340-ac. tract in A. Senchall Sur. ..... Drlg. shale 3,074 ft.

Humble O. & R. Co.'s No. 3 Reid, 466 ft. N of S line and 466 ft. W of E line of lease in Goodrich Sur. No. A-305 ..... Location.

Humble & Magnolia's No. 2 Rudel-Oster, 150 ft. S of Amerada & Stanolind's No. 2 Fletcher, half way between E and W lines of 50-acre tract in J. House Sur. No. 34 ..... Location.

Humble O. & R. Co.'s No. 1 Ben Scherer, 1,000 ft. S of NW cor. and 335 ft. E of W line of 135-ac. tract in J. H. Edwards Sur. ..... Drlg. sand and shale 5,599 ft.

Humble & Magnolia's No. 1 H. Theak, 200 ft. from E line and 2,500 ft. from S line of 180-acre tract in Wm. Hurd Sur. ..... Location.

Humble O. & R. Co.'s No. 1 E. E. Weaver, C. N. Pillot Sur., 300 ft. S and 473 ft. E of Weaver 32.94-acre tract ..... Comp. 7 bbls. hour, ¼-in. choke.

Shell Pet. Co.'s No. 1 W. W. Baker, 440 ft. S of C of N line of lease, J. House Sur. No. 34 ..... Location.

Shell Pet. Co.'s No. 2 W. W. Baker, 630 ft. S of No. 1 and 466 ft. from W line of lease, J. House Sur. No. 34 ..... Location.

Skelly Oil Co.'s No. 1 Schultz, J. H. Edwards Sur., 456 ft. from S line, 404 ft. from E and W lines .... Derrick.

Texas Co.'s No. 1 Sam Lewis, C. N. Pillot Sur., 466 ft. N 1 deg. W and 550 ft. N 89 deg. E of SW cor. of lease ..... Comp. I.P. 136 bbls. 11½ hrs., 18/64-in. choke; T.P. 1,650 ft.; C.P. 2,050 lbs.; set 2½-in. at 6,519 ft.

Texas Co.'s No. 1 Wm. Hirsch, 163 ft. E and 466 ft. N of most westerly SW cor. of lease, J. House Sur. .... Soft oil sand 5,604-12 ft.; T.D. 5,612 ft.; W.O.C.

Texas Co.'s No. 1 Albert Ziegler, 517 ft. E and 155 ft. S of NW cor. of Wm. Hurd Sur., elev. 189 ft. ..... T.D. 1,144 ft.; W.O.C.

Windsor Oil Co.'s No. 3 Petrich, J. H. Edward Sur., 466 ft. out of SW cor. lease ..... T.D. 5,600 ft.; W.O.C.; T.S. 5,592 ft.; set 7-in. at 5,590 ft.

ESPERSON—LIBERTY COUNTY

General Crude Oil Co.'s No. 7 Davis (W.O.), Duncan Sur... T.D. 6,873 ft.; P.B. 4,143 ft.; reaming 4,556 ft.

General Crude Oil Co.'s No. 10 Moore's Bluff, M. Duncan Sur., 1,500 ft. from E line and 2,100 ft. from N line of 632-acre tract ..... T.D. 6,534 ft.; P.B.; W.O.C. 4,631 ft.

HULL—LIBERTY COUNTY

Bashara Oil Co.'s No. 1 Hannah, Jessie De Vore Sur., 125 ft. E of Texas Co.'s No. 1 Hannah, 50 ft. N of S line ..... Drlg. shale 3,605 ft.

Gulf Prod. Co.'s No. 96 Phoenix, Jesse Devore Sur., 97 ft. from S line and 694 ft. from W line ..... Comp. 62 bbls. in 6 hrs. ¼-in. choke.

Gulf Prod. Co.'s No. 97 Phoenix, 80 ft. N of No. 94 and 50 ft. from W line of lease ..... Drlg. 300 ft.

Gulf Prod. Co.'s No. 98 Phoenix, 1,123 ft. E along N line of Miramar 25-acre tract from NW cor. and 98 ft. N at right angles ..... Comp. 62 bbls. 6 hrs., ¼-in. choke.

Houston Prod. Co.'s No. 5 Orgain, Jesse Devore Sur., 100 ft. S of No. 4 ..... Comp. 900 bbls., ½-in. choke.

Humble Oil & Ref. Co.'s No. 35 Guedry ..... T.D. 4,068 ft., shale; W.O.C.

Humble Oil & Ref. Co.'s No. 37 Guedry, 50 ft. from S line and 50 ft. from W line of 43-acre tract ..... T.D. sand 4,470 ft.; W.O.C.

Humble Oil & Ref. Co.'s No. 38 Guedry, 444 ft. from S and 50 ft. from E line of lease in J. Devore Sur. .... Location.

Miramar Oil Corp.'s No. 9-A Phoenix, 230 ft. from No. 2 and 299 ft. from No. 3, Devore Sur. ..... Comp. 100 bbls. 17 hrs., ¼-in. choke, T.P. 600 lbs.

Republic Prod. Co.'s No. 151 Dolbear, J. Devore Sur. ..... Shale 2,867 ft.; S.D.

Republic Prod. Co.'s No. 121 Dolbear (W.O.) ..... Drlg. gumbo 930 ft.

Sun Oil Co.'s No. 4-A Carr, 196 ft. due W of No. 3, 50 ft. from N line of lease ..... Derrick.

Sun Oil Co.'s No. 5-A Carr, 50 ft. from N line and 50 ft. from W line of most northerly NW cor. of lease, J. Devore Sur. ..... T.D. 4,950 ft.; set 7⅝-in. csg. 4,384 ft.; W.O.C.

Texas Co.'s No. 6 Barrow fee, 383 ft. S, 150 ft. W from NE cor. of tract, Jesse Devore Sur. ..... T.D. 4,662 ft.; comp. 255 bbls. oil, 2% b.s., in 15 hrs. through ½-in. choke, T.P. 150 lbs., C.P. 375 lbs.

Texas Co.'s No. 1 Albert Ziegler, 517 ft. E and 155 ft. S of NW cor. of Wm. Hurd Sur. ..... Derrick.

Yount Lee Oil Co.'s No. 9 Hooks fee, Jesse DeVore Sur.. Drlg. hard sand 4,792 ft.

Yount Lee Oil Co.'s No. 10 Hooks fee, Jesse DeVore Sur., 50 ft. out of SE cor. lease ..... T.D. 466 ft., gumbo; W.O.C.

LIBERTY COUNTY

Edgewater Oil Co.'s No. 1 Pickett, C. A. White Sur., 50 ft. from W line in C N and S of 5¼-acre tract ..... Abandoned.

Mrs. I. M. Lemon Oil Co.'s No. 1 Richardson, 120 ft. E of Gulf & Humble's No. 1 Carter, in M. G. White Sur. ..... T.D. 3,882 ft.; rerunning tubing.

CONROE—MONTGOMERY COUNTY

Adeltex Oil Co.'s No. 2 Liewelen, R. G. Hamlett Sur., 466 ft. N, 159 ft. W, SE cor. lease ..... T.D. 5,211 ft.; drlg. shale 4,495 ft.

Alpha Pet. Co.'s No. 3 Allen, N offset to Humble's No. 51 South Texas, L. Smith Sur. ..... 91 bbls. per hour, ½-in. choke.

American Liberty Oil Co.'s No. 1-D Harris, J. A. Davis Sur. ..... 2 bbls. dist., ⅝-in. choke.

Bishop Oil Corp.'s No. 2 Rhodes, 466 ft. from W line in center of N and S lines of 25.8 ac. in W. S. Rhodes Sur. ..... Comp. 40 bbls., ¼-in. choke.

Gulf Coast Drlg. & Prod. Co.'s No. 21 Keystone Mills, 755 gt. W of No. 20, A. Steele Sur. ..... Drlg. shale 3,580 ft.

Harrison & Abercrombie's No. 6 Alexander, John McHorse Sur., 466 ft. from W line and 300 ft. from S line ..... Rigging up.

Humble O. & R. Co.'s No. 1-E Cartwright, E offset to Brown & Wheeler's No. 1 Gilbert, J. A. Davis Sur... W.O.C. 5,164 ft.

Humble Oil & Ref. Co.'s No. 5 Griffin, Wilson Strickland Sur., W offset No. 1-B Young ..... W.O.C. 5,110 ft.

Humble O. & R. Co.'s No. 22 Keystone Mills, A. Steel Sur. ..... Comp. 81 bbls. an hour, ½-in. choke.

Humble O. & R. Co.'s No. 31 Keystone Mills, A. Steel Sur.. Drlg. hard sand 5,040 ft.

Humble Oil & Ref. Co.'s No. 26 Madeley ..... 29 bbls. in 1 hour, ½-in. choke.

Humble Oil & Ref. Co.'s No. 29 A. A. and D. A. Madeley, 761 ft. SE of No. 12, Ransom House Sur. ..... 72 bbls. an hour, ½-in. choke.

Humble Oil & Ref. Co.'s No. 40 Madeley, N offset to No. 4 Moorhead, R. House Sur. ..... Drlg. sand 1,069 ft.

Humble O. & R. Co.'s No. 49 Moore, L. Smith Sur. ..... T.D. 5,128 ft.; W.O.C.

Humble Oil & Ref. Co.'s No. 67-A South Texas, S offset to Alpha's No. 2 South Texas, T. Slade Sur. .... Drlg. shale 1,776 ft.

Humble Oil & Ref. Co.'s No. 2-A Young, S offset to Tide Water Oil Co.'s No. 4 American Natl. Bank, W. Strickland Sur. ..... Drlg. shale 1,302 ft.

Pine Tree Oil Co.'s No. 1 South Tex. Dev. Co., T.&N.O. Sur. No. 13, 1,600 ft. W line, 810 ft. S line of Sur. .. Temp. abnd.

Strake Oil Co.'s No. 6 Keystone Mills ..... Temp. abnd.

Sun Oil Co.'s No. 17 Keystone Mills, 438 ft. from N and 1,444 ft. W of No. 9, A Steel Sur. ..... Drlg. shale 3,803 ft.

Texas Co.'s No. 8 Moody, 2,330 ft. from N and 466 ft. from W lines of tract, Ransom House Sur. ..... Drlg. hard shale 5,114 ft.

Tide Water Oil Co.'s No. 5 Eichlets, 362 ft. from W and 467 from N lines of lease, Lemuel Smith Sur. ..... T.D. 5,050 ft.; W.O.C.

Tide Water Oil Co.'s No. 16 C. M. Dean, W. C. C. Lynch Sur. ..... T.D. 5,114 ft.; W.O.C.

PORT NECHES—ORANGE COUNTY

Texas Co.'s No. 2 Orange Natl. Bank, Jacob Beaumont Sur., 1,528 ft. W and 200 ft. S of NE cor. of lease .. Drlg. shale and lime 5,091 ft.

Texas Co.'s No. 2-B Polk, 695 ft. N, 150 ft. S of NE cor. of N. Jacob Beaumont Sur. ..... Cored sand, no show, 5,874-76 ft.

LIVINGSTON—POLK COUNTY

Gem Oil Co.'s No. 1 Shrove, 466 ft. from W line and 404 ft. from N line of lease ..... Location.

Gist Oil Co.'s No. 1 Kingsbury County Holding Corp., A. Viesca Sur., 150 ft. N at R/A and 193 ft. E along S line of tract ..... Standing 4,242 ft.

H. B. Owenby's No. 1 Kimes, 330 ft. from N line and 330 ft. from E line of 25-acre lease in A. Viesca Sur. ..... Pits.

H. B. Owenby's No. 1 O. L. Munson, 330 ft. from N line and 320 ft. W of E line of lease in A. Viesca Sur. ... Coring 4,265 ft.

Reading & Bates' No. 2 Davis-Holmes ..... Comp. I.P. 16 bbls. hr., ¼-in. choke, T.P. 625 lbs., C.P. 675 lbs.; set 2½-in. csg. 4,327 ft.

Smith & McDaniel's No. 1 W. B. Munson heirs, 420 ft. from NW line and 296 ft. NE from road in A. Viesca Sur. ..... T.D. 4,337 ft.; flowing into pits; no gauge.

J. L. Werby's No. 1 L. G. Howard, 466 ft. from SE line and 466 ft. from SW line of 70-acre tract, A. Viesca Sur. ..... Derrick.

GRETA—REFUGIO COUNTY

Blanco Oil Co.'s No. 2-C J. J. O'Brien, N. S. Crunk Sur., 466 ft. from E line and 510 ft. from S line of 50-acre tract ..... T.D. 4,387 ft.; W.O.C.

D. & D. Oil Co.'s No. 1 Fannie Heard, 330 ft. from N and E lines of Lot No. 14 ..... Coring 2,470 ft.; 4-min. D.S. test 2,427-70 ft.; tested gas and salt water.

Dash & Blanco's No. 1 J. M. O'Brien, Winfield Sur., 466 ft. from S and E lines of 300-acre tract ..... Drlg. 3,564 ft.

Floboots Oil Corp.'s No. 1 M. C. Bauer, 330 ft. N line, 1,724 ft. from W line, J. M. Ximines Sur. ..... Coring 5,989 ft.

Floboots Oil Corp.'s No. 3-A J. F. Heard, Ximines Sur., 466 ft. from N line and 1,274 ft. from W line of 150-acre tract, 808 ft. E of No. 1 ..... Drlg. 3,218 ft.

Floboots' No. 3-C J. M. O'Brien, 466 ft. from S and W lines of Blk. 10, Smith Subd., E. H. Winfield Sur. ..... W.O.C. 315 ft.

Floboots Oil Co.'s No. 4-C J. M. O'Brien, 503 ft. from E line and 466 ft. from S line of Blk. 8, Peoples Sur. ..... Derrick.

Hewitt & Doughtery's No. 3 Lambert, E. W. Harper Sur. ..... Rigging up.

Humble O. & R. Co.'s No. 2 Fannie Heard, 466 ft. S of most southerly N line and 303 ft. E of most westerly line in Crunk Sur. ..... Drlg. oil sand 5,459 ft.

Humble O. & R. Co.'s No. 3 Fannie Heard, 825 ft. E of most northerly NW cor. of lease and 466 ft. S of most northerly line at R/A, N. S. Crunk Sur. ..... Drlg. shale 3,489 ft.

Humble O. & R. Co.'s No. 3 J. F. B. Heard, Peoples Sur., 466 ft. from W line and 933 ft. N of No. 1 ..... T.D. 4,384 ft.; W.O.C.

Humble O. & R. Co.'s No. 4 J. F. B. Heard, 466 ft. from W line of 500-acre lease and 133 ft. NW of R.R. at right angles, or 2,750 ft. from W line and 3,710 ft. from S line of Peoples Sur. ..... Location.

Humble O. & R. Co.'s No. 3-C J. M. O'Brien, Ximines Sur., 270 ft. N 82° 19 ft. W from NE cor. of Blanco-J. J. O'Brien "A" lease, thence at right angles N 7° 41 ft. E 615 ft. ..... Sand, S.O. 4,390 ft.; comp 540 bbls. day.

Humble O. & R. Co.'s No. 4-C O'Brien, 697 ft. from N and 1,169 ft. from E lines of 100-acre tract, or 840 ft. E of No. 3-C in Ximines Sur. ..... Drlg. shale 525 ft.

Humble O. & R. Co.'s No. 2 Welder, 1,322 ft. from E line and 466 ft. from S line of 752-acre tract in the Winfield Sur. ..... T.D. 1,258 ft.; W.O.C.

Edwin M. Jones' No. 7-A O'Brien, N. S. Crunk Sur. ..... I.P. 15 bbls. per hour, ¼-in. choke, T.P. 175 lbs., C.P. 500 lbs.

Nesral Oil Co.'s No. 1 V. E. Heard, 466 ft. N line, 266 ft. W line, M. J. Ximines Sur. ..... T.D. 6,015 ft.; shale; cored oil sand 6,003-13 ft.; 4½-in. csg. at 6,002 ft.; swabbing water.

Stanolind Oil & Gas Co.'s No. 3-A J. M. O'Brien, Peoples Sur., begin at NE cor. of "A" lease, thence W along N line 1,509 ft., thence S at right angles 466 ft., E offset to No. 4-B ..... T.D. 4,403 ft.; W.O.C.

Stanolind Oil & Gas Co.'s No. 5-B J. M. O'Brien, S offset to No. 1 Welder ..... Rigging up.

United Prod. Co.'s No. 13 Fox, 933 ft. S of No. 12 and 466 ft. from E line of lease in Hews Sur. ..... Derrick.

United Prod. Co.'s No. 14 W. J. Fox et al, 466 ft. from N line and 1,060 ft. W of No. 11 on 848-acre tract in Wm. Hews and L. Brown Sur. ..... Location.

United Prod. Co.'s No. 2-A Lambert, E. W. Harper Sur., 466 ft. out of N cor. of lease ..... I.P. 10 bbls. hr., 3/16-in. choke, T.P. 250 lbs., C.P. 360 lbs.

United Production Co.'s No. 7 Lambert, center of N½ of Blk. 4, M. F. Lambert League ..... Drlg. 2,332 ft.

CLAY CREEK—WASHINGTON COUNTY

Sun Oil Co.'s No. 3 Schermer, N. Clay Sur., 330 ft. NW, 330 ft. SW line of lease ..... Drlg. sandy shale 3,282 ft.

Sun Oil Co.'s No. 4 Schlettman ..... Rigging up.

SOUTH LOUISIANA FIELDS

BLACK BAYOU—CAMERON PARISH

Shell Pet. Corp.'s No. 18 Watkins, 2,515 ft. S, 650 ft. W of NE cor. Sec. 18-12s-12w ..... Coring hard sandy shale 3,961 ft.

CAMERON MEADOWS—CAMERON PARISH

Humble O. & R. Co.'s No. 6 Cameron Meadows, 1,866 ft. W and 150 ft. N of SE cor. of Sec. 16-14s-13w ..... Sand 3,128-33 ft.; drlg. plug.

Humble O. & R. Co.'s No. 7 Cameron Meadows, 2,495 ft. W and 155 ft. S of NE cor. Sec. 16-14s-13w ..... Rigging up.

Humble O. & R. Co.'s No. 1-B Cameron Meadows, 250 ft. W and 2,640 ft. S of NE cor. of Sec. 24-14s-14w ..... Digging canal.

EDGERLY—CALCASIEU PARISH

Rex. Pet. Co.'s No. 18 Hunter, 465 ft. N, 90 ft. E of SW cor. of SE ¼ ..... T.D. 4,050 ft.; preparing to bail.

Union Sulphur Co.'s No. 1 Hunter, 210 ft. E, 1,360 ft. N of SW cor. SE Sec. 21-9s-11w ..... Heaving shale 5,458 ft.; D.S. stuck; S.D.

Union Sulphur Co.'s No. 1 La Prairie Narrone, 1,061 ft. N, 250 ft. W of SW cor. SW Sec. 21-9s-11w ..... Drlg. sticky shale 4,067 ft.

CHOCTAW—IBERVILLE PARISH

Standard Oil Co. of La.'s No. 4 Gay, 2,350 ft. S, 175 ft. E of NE cor. Sec. 52-9s-11e ..... Drlg. shale 2,312 ft.

GUEYDAN—VERMILLION PARISH

Pure Oil Co.'s No. 6 Alliance Trust, 667 ft. E, 1,787 ft. S line of lease, Sec. 34-11s-1w ..... Drlg. sand 5,522 ft.

HACKBERRY—CAMERON PARISH

Gulf Ref. Co.'s No. 13-A Irwin ..... Drlg. water sand 6,353 ft.

Pop Oil Co.'s No. 1 Yount Lee, 3,996 ft. W, 100 ft. N of SE cor. Sec. 19-12s-10w ..... To pump 4,182 ft.

Red Kelly Oil Co.'s No. 1 Duhon, 200 ft. S, 500 ft. E, NW cor. Sec. 27-12s-10w ..... Running csg. 3,361 ft.

Texas Co.'s No. 11-B State ..... Comp. 1,000 bbls. in 24 hrs. through ¼-in. choke, T.P. 750 lbs., C.P. 1,000 lbs.

Texas Co.'s No. 10-B State, 1,000 ft. E, 200 ft. N of NE cor. Sec. 13-12s-10w ..... T.D. 7,272 ft.; setting whipstock to sidetrack.

Union Sulphur Co.'s No. 1 Barbee est., 1,720 ft. N line, 320 ft. E of SW cor. Sec. 12-12s-10w ..... Drlg. shale 7,945 ft.

Union Sulphur Co.'s No. 7 Humble lease, 1,010 ft. N, 661 ft. E of SW cor. Sec. 12-12s-10w ..... T.D. 6,542 ft. in salt; P.B. 5,447 ft.; oil sand 6,141 ft.; to test.

Yount Lee Oil Co.'s No. 11 Gulf Land, Sec. 14-12s-10w ..... Drlg. sand and boulders 3,797 ft.

Yount Lee Oil Co.'s No. 14 Gulf Land ..... Drlg. gumbo 471 ft.

IOWA—CALCASIEU AND JEFF DAVIS PARISHES

Barnsdall Oil Co.'s No. 1 Caffal, 330 ft. N and E of SW cor. of lease ..... Location.

Barnsdall Oil Co.'s No. 4 Fontenot, 330 ft. N, 330 ft. W out of SE cor. 80-ac. lease, Sec. 7-9s-6w ..... D.S.T. sand, show oil 6,917--31 ft.

Magnolia Pet. Co.'s No. 3 James Bowman, 660 ft. W, 330 ft. N of SE cor. NE SW Sec. 12-9s-7w ..... Drlg. gumbo and lime 6,846 ft.

Magnolia Pet. Co.'s No. 6 Wait ..... Bldg. road.

Magnolia Pet. Co.'s No. 7 Wait ..... Bldg. road.

Shell Pet. Corp.'s No. 6 Fontenot, Sec. 7-9s-6w, 900 ft. N, 330 ft. W of SE cor. of lease ..... T.D. 6,929 ft.; preparing to set csg.

Shell Pet. Corp.'s No. 7 A. D. Fontenot, 990 ft. N and 330 ft. W of SE cor. of lease in Sec. 7-9s-6w ..... Drlg. shale 6,062 ft.

Shell Pet. Corp.'s No. 7 Heyd, 660 ft. out of NW cor. of lease, Sec. 13-9s-7w ..... Drlg. shale 2,064 ft.

Shell Pet. Corp.'s No. 8 Heyd ..... Bldg. road.

Shell Pet. Corp.'s No. 1 Johnson ..... Moving in.

Shell Pet. Corp.'s No. 3 E. O. Stafford, 330 ft. from N and E lines of W½ NW Sec. 18-9s-6w ..... Coring shale 6,510 ft.

Shell Pet. Corp.'s No. 1 Tuter ..... Bldg. derrick; moving in.

JENNINGS—ACADIA PARISH

Yount Lee Oil Co.'s No. 13 Houssiere-Latrielle, Sec. 47-9s-2w, 300 ft. E of No. 12 ..... Sidetracking 7,001 ft.; drlg. shale 7,082 ft.

LAKE BARRE—TERREBONNE PARISH

Texas Co.'s No. 10 L.L.&E., 4,543 ft. S, 503 ft. W of NW cor. Sec. 30-21s-20 ..... Drlg. anhydrite 3,308 ft.

Texas Co.'s No. 20 State-Lake Barre, Sec. 30-21s-20e ..... Drlg. anhydrite 3,428 ft.

LEESVILLE—LAFOURCHE PARISH

Robt. Boles' No. 1 Crosby ..... Drlg. sand 3,676 ft.

Emerald Pet. Corp.'s No. 1 State Bayou LaFourche, 990 ft. N and 430 ft. E of SW cor. of Sec. 26-21s-22e ..... Sand 3,636 ft.; W.O.C.

Lincoln Oil Co.'s No. 2 State, 2,890 ft. N of S line of Sec. 26, in Bayou LaFourche, 15 ft. W of E bank, Sec. 26-21s-22e ..... Rigging up.

T. & L. Prod. Co.'s No. 1 Donaree Nicol, 2,306 ft. N and 1,106 ft. E of SW cor. of Sec. 26-21s-22e ..... Drlg. 1,450 ft., shale.

Texas Co.'s No. 11 L.L.&E., 2,921 ft. S, 1,560 ft. W of NE cor. Sec. 27-21s-22e ..... Drlg. rock 4,164 ft.

Texas Co.'s No. 13 L.L.&E. ..... Drlg. shale 1,487 ft.

LOCKPORT—CALCASIEU PARISH

Magnolia Pet. Co.'s No. 7 Farquaher, 330 ft. S, 174 ft. W of NE cor. SW NE Sec. 8-10s-9w ..... Drlg. rock 2,237 ft.

Magnolia Pet. Co.'s No. 11 Bordages, 660 ft. N, 490 ft. W of SE cor. NE NE Sec. 8-10s-9w ..... Drlg. shale 7,275 ft.

Magnolia Pet. Co.'s No. 19 Miller, Sec. 9-10s-9w ..... T.D. 4,420 ft.; W.O.C.

Union Sulphur Co.'s No. 1 Farquaher, 200 ft. S and W lines, NE cor. SW SE Sec. 36-12s-10w, 2-ac. tract ..... T.D. 7,702 ft.; P.B. 7,460 ft.; tested salt water; S.D.

Union Sulphur Co.'s No. 2 Moss (W.O.), 350 ft. S, 210 ft. W of NE cor. NW SE ..... T.D. 6,675 ft.; set 7-in. csg. at 6,664 ft.; milling 6,300 ft.

PORT BARRE—ST. LANDRY PARISH

Gulf Ref. Co.'s No. 5 Wilson-Cockran, 600 ft. N, 910 ft. E of No. 2, Sec. 4-6s-5e ..... S.D. 3,418 ft.

Texas Co.'s No. 17 Botney Bay, 1,800 ft. S 8 deg. W, 600 ft. N 82 deg. most southern NE 560 deg. tract, Sec. 4-6s-5e ..... Derrick.

Texas Co.'s No. 20 Botney Bay ..... Drlg. shale 3,162 ft.

SORRENTO—ASCENSION PARISH

Union Sulphur Co.'s No. 2 Lacy White Frank, 1,175 ft. N, 1,615 ft. W of SE cor. Sec. 16-10s-4e ..... Salt 6,520 ft.; abnd.

Union Sulphur Co.'s No. 25 United Land ..... T.D. 6,100 ft.; abnd.

STARKS—CALCASIEU PARISH

Gulf Ref. Co.'s No. 34 Lutcher-Moore, 1,313 ft. N, 400 ft. E of SW cor. Sec. 19-9s-12w ..... Drlg. hard broken sand 3,614 ft.

Union Sulphur Co.'s No. 5 Industrial Lbr. Co., 300 ft. S of No. 4, Sec. 30-9s-12w ..... T.D. 1,132 ft.; set surface csg.

SULPHUR—CALCASIEU PARISH

Union Sulphur Co.'s No. 787 fee, 119 ft. N, 1,632 ft. W of C Sec. 29-9s-10w ..... T.D. 4,983 ft.; to deepen; waiting on cutting tool.

Union Sulphur Co.'s No. 788 fee, 602 ft. S, 1,209 ft. W of C Sec. 29-9s-10w ..... Drlg. shale 6,012 ft.

Union Sulphur Co.'s No. 790 fee, 929 ft. S and 802 ft. W of center of Sec. 29-9s-10w ..... T.D. 5,567 ft.; tested salt water to deepen.

Union Sulphur Co.'s No. 791 fee, 529 ft. N, 907 ft. E of SW cor. Sec. 33-10s-12w ..... Drlg. shale 6,722 ft.

Union Sulphur Co.'s No. 1 Noble, 1,745 ft. S, 150 ft. W of NE cor. Sec. 30-9s-10w ..... Drlg. sandy shale 5,018 ft.

Union Sulphur Co.'s No. 1 Bernard Ulrich, 75 ft. out of SW cor. Sec. 19-9s-10w ..... Drlg. sandy shale 4,777 ft.

SWEET LAKE—CAMERON PARISH

Pure Oil Co.'s No. 12 Yount Lee fee, 800 ft. S of No. 11, in line with Nos. 9 and 10, Sec. 12-13-3w ..... T.D. 5,908 ft.; fishing 1 joint drill pipe.

WHITE CASTLE—IBERVILLE PARISH

Shell Pet. Corp.'s No. 8 Wilbert, 717 ft. N 60 deg. 30 min. E from SE of Lot 2 of Fractional Sec. 9, in Sec. 1-11s-12e ..... Drlg. 4,466 ft.

VINTON—CALCASIEU PARISH

Gulf Prod. Co.'s No. 9 Gardner, 572 ft. E and 159 ft. N of SW cor SW half SE Sec. 33-10s-12w ..... Drlg. shale 4,520 ft.

Gulf Ref. Co.'s No. 73-Gardner-Noble-Gray, 643 ft. E, 50 ft. S of NW cor. NE SE Sec. 33-10s-12w ..... T.D. 4,412 ft.; sidetracked 2,963 ft.; drlg. sticky shale 2,985 ft.

McLean's No. 16 Gray ..... Drlg. 1,977 ft.

Tri-Oil Co.'s No. 1 Matilda Gray, 35 ft. W, 35 ft. N, of SE cor. NE SW NE Sec. 33-9s-12w ..... Drlg. lime 2,490 ft.

Wilson Broach Co.'s No. 13 Wilson strip, 50 ft. N and 907 ft. E of SW cor. of Sec. 33-10s-12w ..... T.D. 3,510 ft.; no report.

Union Sulphur Co.'s No. 1 Vincent ..... Drlg. 6,548 ft. in heaving shale.

Wilson Broach's No. 14 Wilson Strip, 50 ft. N, 643 ft. E of SW cor. SE NE Sec. 33-10s-12w ..... Pumping 450 bbls. comp.

Vinton Pet. Co.'s No. 3 Gordon, Sec. 34-10s-12w, 209 ft. from S line, 50 ft. from W line of 2-ac. tract ..... Drlg. shale 3,238 ft.

MISCELLANEOUS WILDCATS

TEXAS

AUSTIN COUNTY

Humble O. & R. Co.'s No. 1 Chelsey, 418 ft. from NW and 150 ft. from S line of 26-ac. tract in W. C. White Sur. ..... Rigging up.

Merrie Bros., Perrini, Turnbull & Irwin's No. 1 Headge ..... Rigging up.

R. R. Mitchell's No. 1 H. Schleider, J. F. Fitzgibbons Sur., 300 ft. out NE cor. 96-ac. tract ..... T.D. 105 ft.; S.D.

Tibbets et al's No. 1 Heidman, 4,320 ft. W along N line from NE cor. of A. Larison Sur. in J. Cooper Sur., 410 ft. at right angles north ..... Drlg. shale 2,552 ft.

BRAZORIA COUNTY

Danciger O. & R. Co.'s No. 3-A Hunt, 2,100 ft. from E, 2,000 ft. from S lines of Hunt's 1,000-ac. tract in W. C. Carson Sur. ..... Drlg. new hole 2,515 ft.

Danciger Oil & Ref. Co.'s No. 1-B Hunt, 1,400 ft. from NW line and 1,750 ft. from NE line of 1,600-acre tract in W. C. Carson Sur. ..... Drlg. 1,010 ft.

Danciger Oil & Ref. Co.'s No. 1 Stark-Brown, 330 ft. out of most easterly NE cor. of lease in Perry & Austin Sur. ..... Drlg. 790 ft.

Harrison & Abercrombie's No. 1 M. D. Howe, 993 ft. W line, 330 ft. N line, Blk. 18, Thomas Spraggins Sur. ..... T.D. 7,003 ft.; abnd. and dry.

Shell Pet. Corp.'s No. 2 Haury (Danbury), H.T.&B. R.R. Sur., 720 ft. SE of No. 1 Blakely-Winston ..... T.D. 6,067 ft., salt; P.B. to 3,950 ft.; T.D. sandy shale 4,342 ft.; setting whipstock.

BRAZOS COUNTY

H. Elliott et al's No. 1 W. F. Odom, near center of 379-ac. tract in SW cor. of Isack Curil Sur. ..... Cmtd. surface csg. 30 ft.

Lauer et al's No. 1 Peters, 300 ft. SE line, 300 ft. SW line of E. V. Peter fee, G. Powell Sur. ..... Derrick.

F. H. Scott's No. 1 Klintworth, I. Curd Sur., 300 ft. from N line, 400 ft. from E line ..... Gas sand 1,393-1,420 ft.; S.D., orders; T.D. 1,512 ft.

BURLESON COUNTY

Mid-Tex Oil Co.'s No. 2 Young, 700 ft. S of No. 1 in J. Bird Sur. ..... Drlg. shale 1,015 ft.

CHAMBERS COUNTY

John H. Carrecker's No. 1 B. Weaver, 404 ft. out of SE cor. of lease in A. Weaver Sur. ..... T.D. 440 ft.; S.D.

J. E. Jones' No. 1 Canada-Smith Ranch, 356 ft. W and 330 ft. N of NE cor. of W. F. Gau 544-acre tract in J. S. Roberts Sur. ..... Set 10¾-in. csg. at 1,370 ft.; drlg. shale 2,420 ft.

Miramar Oil Co.'s No. 1 Geo. Stengler, V. Barrow Sur., 3,200 ft. from E line and center of N and S lines of lease ..... Derrick and digging pits.

FORT BEND COUNTY

Edwards Drlg. Co.'s No. 1 H. Hausler, 780 ft. S of NE cor. of 103-acre tract, 510 ft. W of E line, Wickson Sur. ..... Location.

O'Connor Dome Oil Co.'s (was A. N. Phillips et al's) No. 1 Grigar, 2,150 varas E line, 1,550 varas N line, J. S. O'Connor Sur. ..... S.D. 5,166 ft.

Phillips Pet. Co.'s No. 1 A. B. Holmes, 600 ft. from E and 300 ft. from S lines of 200-ac. tract in Samuel Isaac Sur. ..... Drlg. shale 5,180 ft.

Porter & Blanchard's No. 2 Wheat ..... Odor oil 2,528-83 ft.; T.S. 2,928 ft.; T.D. 2,967 ft.; set screen; making salt water and gas; waiting orders.

Quintana et al's No. 2 Wood, O'Connell & Mellon, 304 ft. from S line and 5,360 ft. from E line of lease .. T.D. 6,305 ft.; tested S.W.; S.D. for orders.

GRIMES COUNTY

Clark & Dodd's No. 1 Murry, 150 ft. W line, 300 ft. S line, Anderson Sur. ..... T.D. 708 ft.; S.D.

Cambrian Oil Co.'s No. 1 W. V. Sangster, John Moore Sur., 300 ft. out of most westerly NW cor. of 218-ac. tract ..... Derrick.

Foster et al's No. 1 Quinn, 7,100 ft. from W line, 3,900 ft. from N line of S. F. Austin Sur. ..... T.D. 3,325 ft.; P.B. 3,200 ft.

H. C. Ratcliff's No. 1 Fulgham, A. Tuttle Sur., 600 ft. N line, 540 ft. W line of lease ..... Derrick.

HARDIN COUNTY

Greer & Frazier's No. 1 O. Sternberg, 660 ft. out of SW cor. of E 384 acres in H.&T.B. Sur. No. 283 ..... Rigging up.

Resource Oil Corp.'s No. 1 Sternberg Oil Co., C. of G. Dorsey No. 3 Sur., Abst. 193 ..... Derrick.

HARRIS COUNTY

Golding & Murchison's No. 1 Clappert, W.C.R.R. Sur., Blk. 4, Sec. 9, 1,350 ft. from E line, 330 ft. from N line ..... T.D. 3,250 ft.; show gas and odor oil 3,198-3,220 ft.; top Hockley 5,375 ft.; top Operculina 6,230 ft.; coring ahead.

J. A. Hodges' No. 1 Scott, 200 ft. S, 900 ft. W of intersection of Crosby Huffman, F. Rankin Sur. ..... T.D. 6,275 ft.; S.D.

G. L. McCarthy et al's No. 1 Preston, Wm. Jones Sur., 236 ft. E, 161 ft. S of NW cor., Blk. 9, W. A. Payne Subd. ..... Drlg. shale 5,500 ft.

HOUSTON COUNTY

Murmac Oil Co.'s No. 1 G. L. Murray & Son, John Durst Sur. ..... T.D. 3,450 ft.; S.D.

JACKSON COUNTY

Atkins & O'Neil's No. 1 Ward (Davis), C Lot 93, I.&G.N. Sur. No. 18, Blk. 8 ..... Drlg. 4,270 ft.

Encio Gas Co.'s No. 1 Toney, 150 ft. out of NW cor. of Toney's 1,064-ac. tract in Raymor Musquiz Sur. .. Drlg. 2,800 ft.

JASPER COUNTY

Louis Franklin's No. 1 Cartwright, 360 varas E line and 740 varas S line of Lot 19, Edward Legrande Sur. ... Derrick.

JEFFERSON COUNTY

Lucky Strike Oil Co.'s No. 1 Walker, D. Easley Sur., 2,100 ft. N, 1,400 ft. E of NW cor. of Lot No. 13 .... S.D. 1,708 ft., shale and lime.

Sun Oil Co.'s No. 1 H. Long, 1,500 ft. N line, 990 ft. E line of lease ..... Coring 6,062 ft.; D.S. test showed little oil and water with gas; 500 lbs.

LIBERTY COUNTY

Denton & Akin's No. 1 B. E. Quinn, A. B. Rozelle Sur., 3,075 ft. from E line and 4,750 ft. from S line of Sur. ..... Made 6-min. D.S. test 5,477-5,561 ft.; 3 thribbles mud, no pressure, ¼-in. choke on top and bottom; T.D. 5,626 ft.; abnd.

Extension Oil Co.'s No. 1 J. A. Lovett, 200 ft. from E and 600 ft. from S line of lease, P. P. Deevers Sur... Drlg. dry sand 1,520 ft.

Gulf Prod. Co.'s No. 2 Kirby, John Pleasants Sur., 1,866 ft. S of No. 1 ..... Odor oil 7,198 ft. and 7,175 ft.; coring shale 7,455 ft.

Gulf Prod. Co.'s No. 4-C Kirby, 7,100 ft. S and 1,383 ft. E of NW cor. of John Pleasant Sur. ..... Rigging up.

Liberty & Independent Oil Co.'s No. 1 J. M. Neal, 3,550 varas from E line and 500 varas from N line of Samuel Strong Sur. ..... Derrick.

Miramar Oil Corp.'s No. 1 Crowe & Jacobs, H.&T.C. Sur. 21, 950 ft. W of E line, 110 ft. N of S line of 300-ac. tract ..... T.D. 4,563 ft.; swabg. 200 bbls. of P.L. oil daily through 5/16-in. choke; grav. 26, corrected; drlg. 4,765 ft.; shale went dead.

H. Sample's No. 1 Security Trust Co., 466 ft. from S and E lines of N 600 ac. of Lot 3 of H. Sample Subd. of J. Faulk Sur. ..... Location; clearing titles.

Seale's No. 1 Finley, 700 ft. E and 400 ft. N of SW cor. of 50-acre tract, A. B. Hardin Sur. ..... Derrick.

Turnbull & Irwin et al's No. 1 N. Hildebrandt, W. Whitlock Sur., C of E ½ of survey ..... Rigging up.

MATAGORDA COUNTY

Oils Consolidated's No. 2 Hawkins, 200 ft. due NE of No. 1 well ..... Cmtd. 9⅝-in. csg. at 5,358 ft.; T.D. 5,383 ft.; W.O.C.

Skelly Oil Co.'s No. 1 Cobb, M. Cummins Sur., 434 ft. from E, 1,506 ft. S of F. G. Cobb's 167-ac. tract .... T.D. 7,186 ft.; P.B. to 7,076 ft.; 120 bbls. distillate per day through ⅝-in. choke, 7,800,000 ft. gas; equalized pressure 2,575 lbs.; 57 grav. brown distillate.

United North & South Dev. Co.'s No. 1 Unit 4, Buckeye farm, J. C. Keller league, 214 ft. N line and 202 ft. E line of lease ..... Drlg. shale 4,044 ft.

United North & South Dev. Co.'s No. 1 Unit 6 (No. 2 Stoddard), 25 ft. each way out of NW cor. of Lot 19, Buckeye townsite ..... T.D. 9,257 ft.; sidetracked at 6,750 ft.; coring 8,190 ft.

United North & South Dev. Co.'s No. 1 Unit No. 58, 250 ft. N and 200 ft. W of SE cor. of Unit No. 58 ..... Derrick.

MONTGOMERY COUNTY

Baker et al's No. 1 Benker, D. James Sur. ..... Old T.D. 4,921 ft.; P.B. to 4,909 ft.; T.D. 4,647 ft.; D.S. test 4,629-47 ft., 3 min., ⅛-in. choke on top and bottom; small amount gas; no pressure; lost seat; S.D.

Cooper & Smith's No. 1 Post, Daniel Roper Sur. ..... Cored lignite and sandy shale 2,823-27 ft.; coring ahead.

Deering & Frazier's No. 1 Hicks, 660 ft. S and W of NE cor. 565-acre tract, T. Taylor Sur. ..... Bldg. road.

Hamill & Smith's No. 1 Foster Lbr. Co., Pryor Bryan Sur., 7,147 ft. from W line and 3,760 ft. from N line of lease ..... Shale 6,270 ft.; no report.

Steen Drlg. Co.'s No. 1 Long Bell Lbr. Co., 440 ft. S and E from NW cor. of Wilson Barker Sur. ..... Top Cockfield 5,315 ft.; sand 5,867-69 ft., sand 5,873-77 ft.; D.S. test 5,855-77 ft. showed 350 lbs. pressure with 2 gals. dist. and 2 gals. mud in 4 min.; coring 5,981 ft.; D.S. test 5,873-84 ft., 575 lbs. pressure, 15 min., 1 joint brown dist., ¼-in. choke on top, ⅝-in. choke on bottom; D.S. test 6,016-53 ft.; showed 23 thribbles salt water, 11 min., 250 lbs.

MADISON COUNTY

Paul Edwards et al's No. 1 L. M. Peters, Mahala Wilkinson Sur., 400 ft. from N line and 300 ft. from W line of 132-acre tract ..... Rigging up.

Foster et al's No. 1 Poteet, J. H. Hunter Sur., 350 ft. S and 150 ft. E of most westerly NW cor. of 288-acre tract ..... S.D. 2,280 ft.

NACOGDOCHES COUNTY

James W. Rich's No. 1 Unknown, J. L. Ewing Sur., 2,777 ft. from W line, 5,208 ft. from S line of survey.. No report.

NEWTON COUNTY

Tide Water Oil Co.'s No. 1 Southwest Lbr. Co., 467 ft. S of most southerly N line and 1,664 ft. E of most westerly W line of 1,500-ac. tract in Henry Cochran Sur. ..... Rigging up.

ORANGE COUNTY

Blue Line Oil Co.'s No. 1 Godwin, Richard Ballew Sur., 300 ft. from E line and 150 ft. from NE line of Godwin 20-acre tract ..... S.D. 900 ft.; bldg. road.

Texas Louisiana Oil Co.'s No. 1 Starks, 2,450 ft. N of NW cor. M. Delano Sur. 68, 10,500 ft. E at R/A .... T.D. 1,200 ft.; S.D.

POLK COUNTY

Alpha Pet. Co.'s No. 1 Kirby & West, Thomas Sur., 330 ft. out of SE cor. of 150-ac. lease ..... T.D. 4,907 ft.; will drill plugs and test; W.O.C.; top Cockfield 4,770 ft.

REFUGIO COUNTY

C. B. Bunte's No. 1 Rook, 12,400 ft. from W and 11,500 ft. from N line of Antonio De Lavina Sur. ..... Moving in.

Cox et al's No. 1 F. W. Bissett, J. Crockett Sur. ..... S.D. 1,100 ft.

Heard-Holland Oil Co.'s No. 1 Peck, 366 ft. N and W out of NW and SW of Bonnie View Subd. ..... Top Heterostegina 4,437 ft.; S.D. 4,500 ft.

Humble Oil & Ref. Co.'s No. 12 O'Connor, 930 ft. W of No. 11, J. Keating Sur. ..... T.D. 3,082 ft.; preparing to make D.S. test.

Humble Oil & Ref. Co.'s No. 13 O'Connor, 923 ft. NE of No. 12 and 933 ft. NW of No. 11 on 5,545-acre tract in John Keating Sur. ..... Location.

G. Jeffries' No. 1 James F. Power, 750 ft. from N and 1,812 ft. from E lines of 500-acre lease in J. J. Garza and J. Vidaurri Sur. ..... S. D. 550 ft.

SAN AUGUSTINE COUNTY

Fidelity Exploration Co.'s No. 1 Bryan & Flourney, 1,926 ft. from N and 725 ft. from E lines of Sec. 14, S.P.R.R. Sur. ..... Drlg. 650 ft.

SAN JACINTO COUNTY

Darby Jones' No. 1 McBee ..... Drlg. sandy shale 2,695 ft.

Piedmont Oil Co.'s No. 2 Foster, 330 ft. each way out of NE cor. Geo. Taylor Sur. ..... Building road.

Turnbull & Irwin's No. 1 Fitzgerald, Gowan Harris Sur., 3,300 ft. from E line and 1,320 ft. from N line of tract ..... T.D. 4,040 ft.; S.D.

VICTORIA COUNTY

Markle et al's No. 1 Dunlap, Manuel Zepeda Sur., 9,550 ft. along NW line of survey from most northerly NE cor. and 1,475 ft. SE at R/A ..... S.D. 1,818 ft.

Wm. Quick's No. 1 Tom Joshua, 330 ft. out of NW cor. of Blk. 21, F. G. Hidalgo Sur. ..... Rigging up.

Texas Co.'s No. 6-A McFaddin, A. J. Gray Sur., 5,600 ft. from NE line, 250 ft. from SE line ..... Drlg. sand 4,601 ft.; top sand 4,549 ft.

Texas Co.'s No. 7-A McFaddin, 250 ft. due N of No. 7, A. J. Gray Sur. ..... T.D. 1,597 ft.; standing with 125 lbs. pressure.

Texas Co.'s No. 8 McFaddin, A. J. Gray Sur., 6,600 ft. N of S line, 1,383 ft. from E line of NE cor. ..... D.S. stuck 3,609 ft.; cut pipe to 2,798 ft.; P.B. to 1,825 ft.; sidetracked to 3,609 ft.; set 8⅝-in. csg. to 3,426 ft.; drlg. shale and lime 4,323 ft.

WHARTON COUNTY

Pure Oil Co.'s No. 1 W. Garrett, 4,456 ft. SE and 1,690 ft. NE of W cor. of Sec. 28 ..... To deepen; T.D. 6,343 ft.

Pure Oil Co.'s No. 1 Stewart ..... T.D. 5,983 ft.; preparing to pull 5½-in. O.D. csg. cmtd. 5,311 ft.

Pure Oil Co.'s No. 2 Stewart, Morris & Cummings Sur., Sec. 25, 990 ft. out of SW cor. of 160 acres ..... Drlg. sandy shale 6,155 ft.

Pure Oil Co.'s No. 1 Wallace Houston, 858 ft. SE of NW line, 1,690 ft. NE of SW line, Sec. 28 (T. W. Heard Sur.) ..... T.D. 6,457 ft.; shot 5-in. csg. at 5,554 ft.; drlg. sandy shale 6,165 ft.

SOUTH LOUISIANA

ACADIA PARISH

Rhodes Drlg. Co.'s No. 1 Latrell ..... Drlg. gumbo 1,870 ft.

Superior Oil Co.'s No. 1 P. O. Hermandes, 990 ft. W, 990 ft. S of NE cor. SE Sec. 34-8s-3e ..... Drlg. hard shale 8,640 ft.

Woodley Pet. Co.'s No. 1 Links Bros., 150 ft. S and E of NW cor. Sec. 36-7S-1e ..... Drlg. sandy shale 2,320 ft.

ASCENSION PARISH

Turnbull & Irwin's No. 1 Community (Darrow) ..... T.D. 4,436 ft.; swabbing.

BEAUREGARD PARISH

Humble Oil & Ref. Co.'s No. 1 Long Bell, 200 ft. E of W line and 2,640 ft. S of N line of Sec. 11-5s-7w ... Drlg. shale 7,040 ft.

CALCASIEU PARISH

Fred Oil Co.'s No. 1 Faisst, 566 ft. N, 300 ft. W of SE cor. of NW of SE Sec. 26-8s-10w ..... S.D. 2,015 ft.

Union Sulphur Co.'s No. 1 Barbe, 2,681 ft. W, 2,647 ft. S of NE cor. Sec. 1-9s-8w ..... Drlg. hard shale 8,125 ft.

IBERIA PARISH

Y. D. Spell's No. 1 Bernard, 5,138 ft. SW cor. along western boundary line, then in NE direction 1,140 ft. along N line of Bernard land, 52 ft. S of well in Sec. 54-12s-7e ..... S.D. 2,350 ft.

JEFFERSON DAVIS PARISH

Humble O. & R. Co.'s No. 2 Devilbiss, 1,850 ft. S, 250 ft. W of NE cor. Sec. 14-9s-4w ..... Pulling tubing 7,700 ft.

Shell Pet. Corp.'s No. 1 Kratza, 660 ft. S, 330 ft. W of NE cor. NW Sec. 12-9s-4w ..... Coring hard sand 7,545 ft.

LAFOURCHE PARISH

Southern Sulphur Corp.'s No. 1 D. L. Lagraize, 800 ft. E of NW cor. of Lot 7, thence 250 ft. S of Sec. 26-21s-22e ..... Spudded and S.D.

ST. BERNARD PARISH

Southern Sulphur Corp.'s No. 1 Lake Lery, 400 ft. W, 500 ft. N, SW cor. Sec. 28-13s-15e ..... Gumbo 2,867 ft.; no report.

ST. LANDRY PARISH

Bailey Gaunce's No. 1 Lewis, 300 ft. N and E of SW cor. of NW of NE of Section 29-5s-6e (workover) ... Drlg. shale 4,900 ft.

H. H. Hotchins Lbr. Co.'s No. 1 Whiteman Lbr. Co., 250 ft. out of SW cor. NE Sec. 15-5s-6e ..... S.D. rock 3,557 ft.

ST. MARTIN PARISH

Standard Oil Co. of Kansas' No. 1 E. B. Hopkins, Sec. 33-10s-6e ..... Drlg. sandy shale 7,560 ft.

Texts Co.'s No. 6 St. Martin Land Co., 660 ft. S and 500 ft. W of NE cor. SE Sec. 17-8s-7 ..... Derrick.

TERREBONNE PARISH

Texas Co.'s No. 1-B State-Bay Junop, 2,300 ft. N, 950 ft. E of SW cor. Sec. 37-21s-14e ..... Drlg. shale 5,452 ft.

Texas Co.'s No. 10 State-Caillou Island ..... Drlg. shale 4,676 ft.

Texas Co.'s No. 11 State-Caillou Island, 500 ft. SW from No. 9, Sec. 9-23s-20e ..... Drlg. shale 3,619 ft.

Texas Co.'s No. 7 State Bay-St. Elaine, 3,900 ft. N, 2,300 ft. E of SW cor. Sec. 8-22s-18e ..... Drlg. salt 2,964 ft.

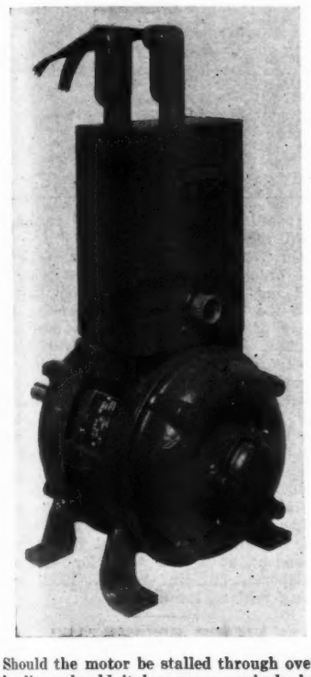
VERNON PARISH

Robt. K. Williams, Jr.'s No. 1 Llano Del Rio, 1,185 ft. S, 1,000 ft. W of NE cor. Sec. 7-1n-9w ..... Rig.

NEW AND IMPROVED EQUIPMENT

Motor Protected Against Burning Out Is Announced

A self-protected motor which cannot burn out is announced by the Lincoln Electric Co., Cleveland, Ohio. It has a protective device built into the windings.



Should the motor be stalled through overloading, should it become excessively hot due to poor ventilation, should it run on single phase, or if for any other reason the motor is blocked the protector shuts off the current and the motor is saved from damage.

With a self-protected motor, less supervision of motors is necessary, repair bills are cut, and frequently smaller size motors can be used, according to the manufacturer. Where large motors are necessary to take care of only infrequent peak loads, a small size self-protected motor may be employed. At the high peak loads the protector will automatically disconnect the motor.

A.C. induction self-protected Lincoln motors are built in sizes from one-half to 30 horsepower, for either two or three phase and standard commercial cycles and voltages. Controls are mounted on the motors.

NASON MAKING DETROIT TRAPS

The Nason Manufacturing Co., New York, is now exclusively manufacturing the full line of "Detroit" steam traps, including the return, vacuum, combination and separating traps, and also the "Detroit" receiver. The principle of the "Detroit" trap is an arrangement of valves, actuated by a tilting tank through an arrangement of levers. The tank, mounted eccentrically on a hollow trunnion, is held in a horizontal position when empty by means of large counterweight. When the tank fills with water (through the hollow trunnion) the counterweight is overbalanced and the tank tilts, actuating the valves. The "Detroit" not only traps condensed steam, but permits condensation to be turned into live steam with the smallest possible use of fuel.

Notes About Trade Literature

Worthington air-compressor units for service stations, repair shops and garages are the subject of a bulletin issued by the Worthington Pump & Machinery Corp., Harrison, N. J.

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Ingersoll-Rand, 11 Broadway, New York, is sending on request a 12-page bulletin on the Cameron hot-oil charging pump, class AHT.

—

A 40-page booklet entitled "The Many Profitable Uses of Simplified Arc Welding" may be obtained by writing to The Hobart Brothers Co., Troy, Ohio.

—

The larger place in specifications being taken by cast steel is the subject of one of the interesting articles in the current number of Valve Values, published by the Edward Valve & Manufacturing Co., East Chicago, Ind.

—

A new catalog covering Plibrico jointless firebrick and other refractory products is announced by the Plibrico Jointless Firebrick Co., 1800 Kingsbury Street, Chicago.

—

The American Steel Works, Kansas City, Mo., has prepared for distribution a 24-page catalog of pipe line, road and roofing equipment manufactured by its asphalt equipment division.

—

The Westinghouse Electric & Manufacturing Co., East Pittsburgh, Pa., announces a publication describing a complete line of explosion resisting motors in ratings up to 200 horsepower.

—

Spang, Chalfant & Co., Inc., Clark Building, Pittsburgh, Pa., have issued a loose-leaf data book on tubular goods and allied subjects. These sheets, bound in a ring cover, contain engineering data upon area of casing and tubing; bursting strength and mill test pressures for casing, drill pipe and tubing; helpful facts about casing, drill pipe and tubing with physical constants, conversion factors, etc. Copies may be obtained by writing on business letter head.

—

A bulletin explaining the OK pipe and flue cleaning machine may be obtained by writing to the O. K. Machine & Manufacturing Co., 421 East First Street, Tulsa.

—

Kennedy heavy bronze globe and angle valves are pictured and described in a bulletin sent on request by the Kennedy Valve Manufacturing Co., Elmira, N. Y.

International Harvester Adds New Tractor to Its Line

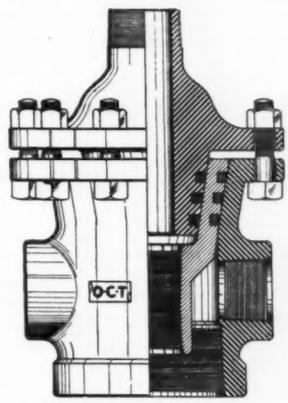
The new McCormick-Deering I-12 is a small, compact, low-priced tractor which the International Harvester Co. has added to its line of industrial tractors. For its size it packs a lot of power (maximum engine power 21 horsepower) and is especially useful where speed and ability to get in and out of close spaces are required.

The new I-12 is 96 inches long overall, 50 inches wide overall, and 52 inches high over the steering wheel, and its turning radius is only 103 inches. It has an unusually flexible speed range from a low of 2½ miles an hour up to 10¼ miles an hour, with foot accelerator and hand control. Brakes of internal expanding type are operated by foot pedal.

Features of the four-cylinder, valve-in-head International-built engine are replaceable cylinders, downdraft carburetion, induction-type magneto, oil air cleaner, and oil filter with a metal element that may be easily cleaned. Efficient operation is facilitated by the use of 17 ball bearings and 6 tapered roller bearings. Easy steering is made possible by mounting steering worm on roller bearings. The rear axle is designed for uniform stress to withstand loads all the way across.

O-C-T Tubing Head Has Important Safety Features

Oil Center Tool Co., Houston, Tex., announces production of the new O-C-T Type H tubing head which introduces interesting features of safety. It permits tubing to be run and landed in the head through a blowout preventer or a master gate valve. It permits effecting a seal between the tubing and casing string before the blowout preventer is removed, this being made possible through use of



an adapter on top of the head for connecting the blowout preventer.

The design of the Type H tubing head is such that the christmas tree can be completely assembled and tested in the plant and installed on the well without making up any threads to install the hookup.

The head is made in test pressures up to 4,000 pounds.

Detailed information on this new head is available in the O-C-T 1934 catalog, just off the press.

FOAM GENERATOR ANNOUNCED

The Phomene hopper, a continuous foam generator embodying new ideas of design and construction, has been announced by the Pyrene Manufacturing Co., Newark, N. J. It is a device for converting a fire line from a continuous water stream to a continuous foam stream. This unit is coupled into a hose line. Water enters at one side. Phomene powder is poured into the hopper and foam is discharged through the hose line at the other side of the unit. The Phomene hopper is designed for service wherever quantities of flammable liquids are used or stored. The foam blankets burning liquids and solids, and smothers the fire quickly. The Phomene hopper has no levers, valves, gauges or moving parts. It is a complete unit built ready for use. There are no parts to be assembled. The base is malleable iron. The hopper and hopper bowl, cast of special composition metal, cannot be bent out of shape. Powder pails can be pounded on a slam bar to empty their contents completely and quickly. In spite of its rugged construction the device weighs only 42 pounds.

ADDS THREE ENGINES TO LINE

The Doman-Marks Engine Co., Amesbury, Mass., manufacturer of direct air-cooled engines, is now producing three horizontal engines known as Models 6AH-309, 6AH-377 and 6AH-400. These develop 85, 104 and 111-horsepower, respectively, at 2,600 r.p.m. The special features are air cooling and a maximum over-all height of 26 inches.

Wildcat Operations in Louisiana-Arkansas

(Continued from Page 72)

Florence Oil Co.'s No. 2 Crawford, Sec. 26-9-13 ..... Used acid 1,975 ft.
Helena O. & G. Co.'s No. 1 Burkett, 330 ft. S and W, NE cor. SE NE Sec. 16-9-13 ..... Comp. pumping 15 bbls.; 1,999 ft.
Earl Halliburton's No. 1 Barr, 990 ft. S, 330 ft. E, NE cor. SW SE Sec. 15-9-13 ..... Comp. flowing 175 bbls.; 1,960 ft.
L. D. Higgins et al's No. 1 Burkett, 330 ft. S, 270 ft. W, NE cor. Sec. 16-9-13 ..... Tested dry; W.O. 2,015 ft.
Lula M. Layton's No. 2 Henderson, 330 ft. S and W, NE cor. NW NW Sec. 29-9-13 ..... S.D. 1,100 ft.
Zan Lloyd's No. 1 Henderson, 330 ft. N and W, C Sec. 29-9-13 ..... W.O.S.R. 2,000 ft.
Miles & Strickland's No. 1 McGee, 17 ft. S, 26 ft. E, NW cor. Lot 18, Sec. 9-9-13 ..... S.D. for fuel 950 ft.
John W. Moffett's No. 1 Logan Oil Co., Sec. 3-9-13 ..... W.O.S.R. 1,985 ft.
Geo. L. Pace's No. 1 Heard, Sec. 10-9-13 ..... Testing 2,044 ft.
Geo. L. Pace's No. 1 Logan, 430 ft. N, 330 ft. E, SW cor. Sec. 26-10-13 ..... Set 6-in. 1,563 ft.
Sabine Royalties Co.'s No. 3 Graham, 330 ft. S and W, NE cor. SW NW Sec. 20-9-13 ..... Set 6-in. 1,502 ft.
L. L. Posey's No. 2 Burkett, 330 ft. S and E, NW cor. NE NW Sec. 10-9-13 ..... W.O.S.R. 1,984 ft.
W. H. Rowe et al's No. 1 Craig, 330 ft. S and E of center Sec. 22-9-13 ..... Set 10-in. 40 ft.
J. A. Stinson's No. 1 Whitney Corp., 330 ft. S and W, NE cor. Sec. 8-9-13 ..... Set 8-in. 1,527 ft.
Walter R. Smith's No. 1 Rheta Williams, Sec. 9-9-13 .... Comp. pumping 65 bbls., 1,975 ft.
Martin L. Stephens' No. 1 Burkett, 330 ft. S and W, NE cor. NE NW Sec. 10-9-13 ..... Comp. flowing 50 bbls., 1,952 ft.
Stumpff & McFall's No. 1 Paul estate, Sec. 10-9-13 ..... Using acid 1,976 ft.
Windsor Oil Co.'s No. 2 Barr, 330 ft. N and E, SW cor. NW Sec. 15-9-13 ..... Location.

RAPIDES PARISH

Ben Banner's No. 1 Bentley Lbr. Co., 2,640 ft. E, NW cor. Sec. 11-4n-5w ..... S.D. 50 ft.
Evans & Collingsworth's No. 1 Hickman, 330 ft. S and E, NW cor. Sec. 40-4-1e ..... S.D. 2,130 ft.; (corrected).
J. C. Prine et al's No. 1 Baum, 600 ft. N and E, SW cor. NE SW Sec. 27-6n-2e ..... S.D. 2,400 ft.

UNION PARISH

Ward & Jones' No. 1 Miller, 330 ft. S and E, NW cor. SW SW Sec. 16-21-2e ..... S.D. 1,210 ft.

WEBSTER PARISH

I. G. Abney Oil Co.'s No. 1-B B. L. Slack, 330 ft. E, 660 ft. N, SW cor. SE Sec. 36-23-11 ..... Drlg. 1,615 ft.
Dorcheat Synd.'s No. 1 Hodges, 330 ft. S and W, NE cor. SE SW Sec. 25-22-10 ..... Dry and abd. 3,419 ft.

Arkansas

ASHLEY COUNTY

K. R. March's No. 1 Williams, 660 ft. S and E, from C of Sec. 8-18-4w ..... S.D. 3,287 ft.

HEMPSTEAD COUNTY

A. H. Bagnelle's No. 1 Trattner & Rhinehart, Sec. 3-13-26. S.D. 1,186 ft.

LAFAYETTE COUNTY

Douglas Lawn's No. 1 Camp, 330 ft. S and W, NE cor. SW SE Sec. 14-15-23 ..... Set 10-in. 52 ft.
George W. Harper's No. 2 Bodcaw, 150 ft. S, 550 ft. E NW cor. SW NW Sec. 14-15-23 ..... S.D. 1,216 ft.

MILLER COUNTY

Duluth-Ark. Oil Co.'s No. 2 Beck, 330 ft. S and E, NW cor. SE SW Sec. 34-15-26 ..... Arranging to pump with jack 2,807 ft.
Fitzwater et al's No. 1 Norson, SW cor. SE SW Sec. 30-15-27 ..... S.D. 3,177 ft.
King Oil Corp.'s No. 1 C. H. Schroder, 300 ft. N, 330 ft. E, SW cor. SW NE Sec. 34-14-23 ..... Drlg. 1,280 ft.
C. E. Murdock's No. 1 Rose, Sec. 4-16-26 ..... Pumped 25 bbls. oil and S.W.; P.B. 2,933 ft.
E. L. Young, Tr.'s No. 1 Patterson, SE cor. SE NE Sec. 5-19-28 ..... O.W.D.D.; drlg. 3,500 ft.

OUACHITA COUNTY

T. P. Lester's No. 1 Poindexter Est., 210 ft. N, 500 ft. W, SE cor. SW NW Sec. 35-15-18 ..... S.D. 2,890 ft.
L. L. McDonald's No. 1 J. A. Robertson, 200 ft. S and E, NW cor. NE NW Sec. 25-15-16 ..... W.O.S.R. 2,092 ft.

UNION COUNTY

E. R. Henderson's No. 2 J. H. Ogden, 330 ft. S and E, NW cor. SW SE Sec. 23-18-14 ..... W.O.S.R. 2,208 ft.
E. R. Henderson's No. 1 Vines, 330 ft. N and W, SE cor. SW SE Sec. 29-18-14 ..... P.B. to 2,161 ft.
Mrs. R. K. Jones et al's No. 1 J. Davis, 330 ft. N and W, SE cor. NW NW Sec. 28-16-14 ..... Set 10-in. 120 ft.
Marine Oil Co.'s No. 2 Simmons, 150 ft. W, 200 ft. N, SE cor. NE NW Sec. 10-18-13 ..... Drlg. 3,218 ft.
Tubal Pet. Co.'s No. 1 Gaddy, 340 ft. N and E, SW cor. SE NW Sec. 14-17-14 ..... S.D.; W.O. 3,416 ft.

Mississippi

GREENE COUNTY

United Gas Public Service Co.'s No. 1 Davis, C NW Sec. 30-1n-5w ..... Drlg. 4,850 ft.

SIMPSON COUNTY

Beavy Corp.'s No. 1 R. J. Beavy, C SW Sec. 24-2n-4e... S.D. for 6⅝-in. 2,325 ft.

WALTHALL COUNTY

Mutual O. & Gas Co.'s No. 1 Boyd, Sec. 14-2n-9e, SW cor. SW SE ..... Moving in rig.

WARREN COUNTY

Orbet Drlg. Co.'s No. 1 R. L. Parker, 300 ft. E CWL, Sec. 14-14-1e ..... Set 6⅝-in. 3,130 ft.

Louisiana-Arkansas Proven Areas

North Louisiana

CADDO—RODESSA

Company, well, farm name, section and block— Remarks:
R. W. Norton's No. 1-B J. B. French, 660 ft. S and E, NW cor., Sec. 34-23-16 ..... Fishing for tubing 6,717 ft.
United Gas Pub. Ser. Co.'s No. 1 Deer, 1,320 ft. N and W, SE cor. Sec. 28-23-16 ..... Location.

CADDO—HOSSTON

Shore Line Oil Corp.'s No. 1 Skelly, 3,770 ft. N, 1,873 ft. W, SE cor. Sec. 13-21-16 ..... Set 6-in. 1,022 ft.; coring 1,051 ft.

OUACHITA PARISH

Ark.-La. P. L. Co.'s No. 6 Rea & Green, 2,240 ft. S, 1,400 ft. W, NE cor. Sec. 10-18-4e ..... Coring 2,279 ft.

RICHLAND PARISH

United Carbon Co.'s No. 1 Wolf, 1,980 ft. N, 660 ft. W, SE cor. Sec. 35-17-6e ..... Set 6-in. 2,285 ft.

SABINE PARISH—ZWOLLE

Baird Bros.' No. 1 Cooper, 330 ft. S and W, NE cor. SE Sec. 30-8-11 ..... W.O.S.R. 2,530 ft.
Dyer et al's No. 1 McCollister, 330 ft. S and E, NW cor. SW NE Sec. 24-7-13 ..... S.D. 1,100 ft.
M. J. Kissick's No. 1 Barr, 350 ft. S and W, NE cor. SW SE Sec. 6-4-11 ..... Set 10-in. 140 ft.
Magnolia Pet. Co.'s No. 2 Gindratt, 330 ft. N, 330 ft. E, SW cor. SE Sec. 30-8-11 ..... T.A. 2,485 ft.
Magnolia Pet. Co.'s No. 3 Peterson, 990 ft. S, 330 ft. E, NW cor. NE NE Sec. 10-7-11 ..... W.O.S.R. 2,748 ft.
Monroe Prod. Co.'s No. 3 Sabine Lbr. Co., 330 ft. S, 330 ft. E, NW cor. SW NW Sec. 7-7-11 ..... Comp. flowing 500 bbls., 2,437 ft.
J. H. Reeve's No. 3 Sabine Lbr. Co., 330 ft. S, 330 ft. E, NW cor. SW NW Sec. 7-7-11 ..... Tested dry 2,447 ft.; S.D. 2,454 ft.
Ben F. Smith's No. 2 Williams, 360 ft. S, 480 ft. W, NE cor. SE Sec. 32-8-11 ..... Dry and abd. 2,580 ft.
Tex-La-Ark Oil Co.'s No. 1 Pickering Lbr. Co., Sec. 3-3-12 ..... S.D. 450 ft.
A. H. Tarver's No. 2 Bauer and Barthold, Sec. 25-8-12 ... S.D.; W.O. 2,639 ft.
John Wrather et al's No. 1 Pruitt, 110 ft. W, 330 ft. N, SE cor. SW NE Sec. 25-8-12 ..... W.O.S.R. 2,575 ft.

SABINE PARISH—PLEASANT HILL

Bridges Co., Inc.'s No. 1 Moore, CEL NW NW Sec. 5-9-12 ..... Drlg. 2,108 ft.

Mississippi

HINDS COUNTY

Alexander & Weaver's No. 1 Mayes, Sec. 25-6n-1e ..... Set 8¼-in. 2,414 ft.

RANKIN COUNTY

Benedum & Trees' No. 1 Southern Dev. Co., Sec. 35-3n-1e ..... Drlg. 5,265 ft.
Ferguson, Fuller & Metz' No. 1 Ammons, 350 ft. E and S, NW cor. NW NW Sec. 35-3n-3e ..... Partly rigged and S.D.
Henslee & Tanner's No. 1 Sloan, 450 ft. S and E, NW cor. NW SW Sec. 7-5n-2e ..... Set 10-in. 724 ft.; drlg. 1,395 ft.

East Texas (Border Counties)

HARRISON COUNTY

R. C. Payne et al's No. 1 Lowery, E. D. Spain Sur. ..... Drlg. 3,408 ft.

PANOLA COUNTY

Acre & Rotunda's No. 1 Burnett Lbr. Co., J. H. Mallory Sur. ..... S.D. for high wtr. 660 ft.
Adams & Despot's No. 10 Adams, Thomas Cox Sur. .... Set 10-in. 20 ft.; drlg. 300 ft.
Givens & Holloway's No. 1 Wooten Est., Winnie Mann Sur. ..... Set 10-in. and S.D. 40 ft.
A. M. Keicker et al's No. 1 Frost Lbr. Ind., M. S. Potts Sur. ..... S.D. 2,115 ft.
R. W. Price's No. 1 Crawford, J. A. Williams Sur. ..... Rigging up.
Sebring et al's No. 1 Bozeman, Wm. English Sur. ..... S.D. 1,806 ft.

SHELBY COUNTY

Bush Oil Int.'s No. 1 Windham, W. M. Blackburn Sur... S.D.; high wtr. 3,366 ft.
Turner & Neil's No. 1 Pickering Lbr. Co., P. W. Harvey Sur. ..... Rigging up.

Joseph A. O'Brien Dies Suddenly at Healdton

Joseph A. O'Brien, 53, division production superintendent in southern Oklahoma for the Carter Oil Co. and a member of the oil industry's "Foreign Legion," died suddenly last week at Healdton, Okla., as he was receiving first aid after collapsing there. He was on a tour of the Carter's properties when taken ill.

He was born March 6, 1881, at Summit City, McKean County, Pennsylvania, and being the son of a driller, started to work at 16 as a pipe liner for the Eureka Pipe Line Co. He was one of six brothers, all in the oil business. When barely of age, he became a producer in the Keystone state and then joined the South Penn Oil Co. in West Virginia. In 1906 he went to Rumania for the Romano Americano Oil Co., a Standard subsidiary. He remained there three years and returned to be married to Miss Inez Montgomery of Claysville, Pa. They returned to Rumania, and Mr. O'Brien became superintendent under E. J. Sadler, now vice president of the Standard of New Jersey, and remained until the war.

On December 3, 1916, Mr. O'Brien was ordered to plug the company's wells, and did so by dropping heavy bailers into the holes. Mr. Sadler then led his party of 85 American men, women and children out of Rumania. They traveled 9,000 miles through Russia, Finland, Denmark and Sweden before they got home. They reached New York on January 27, 1917, and Mr. O'Brien worked for the Carter Oil Co. out of Tulsa until January, 1919, when he returned to Rumania to help clean out the plugged wells and to redrill the fields. He remained until June, 1925, when he was made district superintendent in western Kansas for the Carter and then superintendent at Ponca City for northern Oklahoma, and in August, 1932, was transferred to Duncan.

VICTOR ROSS ESTATE

TORONTO, Ontario, Apr. 2.—Victor Ross, vice president of Imperial Oil, Ltd., who died recently, left an estate valued at approximately $600,000, according to application for probate.

CLASSIFIED ADVERTISING

Leases—Production

WOODBINE SAND Wildcats starting where you have chance might make 40 for 1. Leases-Royalties. E. Croft, Proctor, Tex.

BROKERS-SALESMAN

The scene of the next big oil boom—The Permian Basin in West Texas and New Mexico—Can supply you with drilling blocks, close in acreage to Major Oil Companies drilling blocks or choice non-producing royalties located on geophysical highs—I have my own field men covering this area. Inquiries invited.
B. D. BUCKLEY
Paul Brown Bldg., St. Louis, Mo.

NEW OIL—Crane Upton—Ranchowner's Warranty deed, $6, assume $3. Jefferson Smith, Nalle Bldg., Austin, Tex.

BROKERS—Well located leases and perpetual royalties at wholesale prices, small and large tracts. Write A. C. Smith, P.O. Box 927, Houston, Texas.

BLOCKS with good geology — cheap drilling. Shallow, long life Western Kentucky field. Will sell outright or make drilling deals. Address Box 300, Owensboro, Ky.

ATTENTION Oil Operators. For Sale in fee. Or lease Secs. 12 and 13, Blk. A-47, Andrews County, Texas. What am I offered? J. M., 1611 Pierce St., Amarillo, Texas.

NEW MEXICO Oil and Gas Leases and royalties. Send 50 cents in stamps for new State Oil Map of New Mexico. Roy G. Barton. Clovis, New Mexico.

Leases—Production

TO LEASE 2,000 acres in Southern Alabama oil field. Thousand of acres already leased. J. W. Newman, Mobile, Ala.

ATTENTION Oil Operators—Drilling Blocks, 1,000 acres, good Rotary Rig and Derrick on Ground furnished, near production in Arkansas; 3,000 acres near big gas well in Louisiana; 8,000 acres good geology Oklahoma. Close in Leases and Royalties in Livingston field. Real Bargains. Write for particulars.
FRANK F. MONROE
Box 385 Hugo, Okla.

DEPLETED PRODUCTION

In the shallow fields of Miami County, Kansas, about 300 wells in the best pools, good sized, well blocked acreage. In my more than 50 years, I have never had a more inviting investment — for present and future profits. Col. Sellers, Paola, Kansas.

OIL Leases. Four structures. Colorado. Reliable Geological reports; 70,000 acres; 75% acreage given for test wells. B. E. Goodale, 3 W. 92nd St., New York City.

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Instructions "How to Establish Your Rights" and complete information FREE!
LANCASTER, ALLWINE & ROMMEL
418 Bowen Building,
Washington, D. C.

CLASSIFIED ADVERTISING

For Sale—Equipment

BUTLER ELEVATOR — 10" with 2½x98" links and cement bracket and with either three or four sets slips, any size desired. Elevator and Slips overhauled by us. This is A-1 outfit suitable for handling long strings of pipe. Just came off a 5,500 foot job.

13⅜" SEAMLESS CASING — 4,000' 13⅜" O.D. 61-lb (Sixty-one). Good long length and fine pipe. Also 1,150' 13⅜" O.D. 48-lb J-L Seamless. Both lots in Kansas stocks but priced for delivery anywhere in Mid-Continent. Good quality 13⅜" Seamless is scarce—if interested wire or phone Wichita Office.

CHAIN DRIVEN SAND REEL —Latest type "Marion" No. 90 Heavy Duty Chain Driven Sand Reel complete and first class in every respect. Has split-hub Drive Sprocket and Emergency Brake. Mounted on Steel Skids. Has large line capacity and is built for deep work. Weight: Approx. 9,000 lbs. This reel has been used very little. Sprocket teeth show no wear whatever. This is a bargain. Priced at less than ½ of regular selling price.

USED SEAMLESS AT TULSA —3,400' 5⅞" 20-lb 10-thd.; and 2,700' 7" O.D. (6⅝) 24-lb 10-thd. Both lots excellent pipe. Mostly 23 and 24 foot joints. Used on a wildcat well and we know positively it has been run only one time. Now in our Tulsa yards. Call Ralph Hague, 4-8580, Tulsa; the pipe yard, 4-5584 Tulsa; or 2-1431 Wichita.

REBUILT BOILER FEED AND LINE PUMPS — Large capacity, late type Gardner-Denver and Worthington. Sizes 10x3x10; 10x4x10; 10x3½x10 and 10x4½x10; 500 and 1,500-lb WP on fluid end 175 and 200-lb WP Steam End. Suitable for high pressure rotary boilers and pipe line work. Every pump rebuilt by us and positively guaranteed. Several of the various sizes are in stock at our different branch stores where they may be inspected.

USED ROTARY—Heavy duty type suitable for the deepest work; 125 h.p., 250-lb WP Broderick Boilers; Ideal Slush Pumps; Johnson Gumbo Buster Twin Drilling Engine and all other similar, late type equipment. Just completely overhauled in our shops and ready to go on the job. This is one of the best used Rotaries on the market and the price is attractive. At Wichita. Also several other sizes and type of used Rotaries on hand at Houston, Pampa and Oklahoma City.

(All items listed are offered subject to prior sale.)

THE BRIDGEPORT MACHINE COMPANY
Wichita, Kansas
Phone: 2-1431 or LD-59.

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25 K.W. and 40 K.W. Gas Engines, 220 volts, D.C. Two 100 K.W. Gas Engine Generator Sets, 220 volts, D.C. 7x6 Ingersoll-Rand ER-1 Air Compressor. Six-inch Oster Pipe Threading Machine. Also, large stock of lathes, pipe machines, milling machines, etc. Send for our list.

Terms to suit.
CINCINNATI MACHINERY & SUPPLY CO.
26 West 2nd St. Cincinnati, Ohio.

BRAND NEW WIRE ROPE FOR SALE

15 Reels, 3,500 and 4,500 ft. ⅞ Mild Plow Drilling Cables, GALVANIZED; made specially for hard usage and wet drilling; 14½ cents per foot; ¾, ⅝ and ⅞ Crucible Steel Sand lines; 1" and ⅞ Drilling Cables, lengths up to 5,000 ft.; 30 reels 1" Plow Steel Rotary and Casing Lines, exceptional quality; 16 cents per foot; VERY LOW PRICES. Address Box G-140, The Oil and Gas Journal, Tulsa, Okla.

For Sale—Equipment

RARE opportunity, a practically new Weber 50 H.P. Diesel engine at a ridiculously low figure. Hobson-McFarland Tractor Co., 2131 Washington St., Kansas City, Mo.

ONE 135 Horse Anderson Diesel Engine. The Topeka Foundry & Iron Works Company, Topeka, Kansas.

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600 H.P. OIL ENGINES

2—600 H.P. McIntosh and Seymour Diesel Engines 6 cylinder, Nos. 1836 and 1837. Operated less than 8,000 hours each, guaranteed perfect condition, located at Casper, Wyoming, direct connected with clutch to 2—Worthington Oil Pumps horizontal triplex high pressure capacity 40,000 Bbls. each with all auxiliaries. Will sell all or any part.

W. C. Berry, Mayo Hotel, Tulsa, or Sonken-Galamba Corp., 64 N. 2nd., Kansas City, Kansas.

FOR SALE, practically new Sullivan Oil Field Air Compressor, class WJ-3, size 10x4½x8, two-stage. Purchased new, operated ten days. Equipped with new 75 HP Squirrel cage motor, rheostat starter, also pipe, field boilers, pumps. Berry Asphalt Company, Waterloo, Ark.

2—Worthington Feather Valve Compressors 18"x16" Nos. L-31514 and L-31515 belted to 2—100 H.P. Wagner motors 3 phase 60 cycle 440 volt 860 R.P.M.

2—Worthington feather valve compressors 11"x12" Nos. L-31401 and L-31403 belted to 2—60 H.P. Wagner motors 3 phase 60 cycle 440 volts 860 R.P.M.

W. C. Berry, Mayo Hotel, Tulsa, Okla. or Sonken-Galamba Corp., 64 N. 2nd, Kansas City, Kansas.

Equipment Wanted

WANTED—One steam driven direct connected two stage compressor to process approximately one million cubic feet gas daily at two hundred pounds. Preferably Ingersoll-Rand Type 10 Imperial. Must be in first class condition. Address F. M. Neely, Schneider Hotel, Pampa, Texas.

Incorporations

CHARTERS—Delaware best, quickest, cheapest, most liberal. Free forms. Colonial Charter Co., Wilmington, Del.

DELAWARE CHARTERS—Fees small, free forms. CHAS. G. GUYER, 901 Market St., Wilmington, Del.

Oil Industry Printing

OIL FIELD LEGAL BLANKS

Leases, assignments, releases, township plat books, well records, etc. Request on your letterhead gets free catalog. Olds Press. 215 East Third St., Tulsa, Okla.

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